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# CITY OF MERCER ISLAND

## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | [www.mercergov.org](http://www.mercergov.org)



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## STAFF REPORT

### CRITICAL AREA REVIEW 2

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| <b>Project No.:</b>       | CAO24-003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description:</b>       | A request for a Critical Area Review 2 for the construction of a 316 square foot first floor addition which includes an Accessory Dwelling Unit and a 316 square foot second floor addition to an existing single-family residence and roof remodel on a site located within geologically hazardous areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Applicant / Owner:</b> | Diego Pineda (Build Stuff, LLC) / Rodolfo Hernandez                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Site Address:</b>      | 7520 Mercer Terrace Drive, Mercer Island, WA 98040; Identified by King County Assessor tax parcel number 5453600100.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Zoning District:</b>   | Single Family Residential (R-9.6)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Staff Contact:</b>     | Molly McGuire, Planner                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Exhibits:</b>          | <ol style="list-style-type: none"><li>1. Development Application, received by the City of Mercer Island on March 4, 2024</li><li>2. Revised Development Plan Set, dated September 19, 2024 and received October 7, 2024</li><li>3. Project Narrative, received May 2, 2024</li><li>4. Limited Geotechnical Evaluation prepared by Cobalt Geosciences, LLC, dated August 22, 2023 and received March 4, 2024</li><li>5. Geotechnical Plan Review Letter Addendum (Plan Review) prepared by Cobalt Geosciences, LLC, dated September 19, 2024 and received October 7, 2024</li><li>6. Hazard Report, prepared by the City of Mercer Island on October 30, 2024</li><li>7. Criteria Compliance Narrative, received May 2, 2024</li><li>8. Critical Areas Disclosure and Notice on Title, recorded with King County, WA on April 25, 2024 under Instrument Number 20240425000427</li><li>9. Concurrent Review Request Form, received March 4, 2024</li><li>10. Letter of Complete Application issued by the City of Mercer Island on May 14, 2024</li><li>11. Notice of Application, dated May 20, 2024</li><li>12. City of Mercer Island Review Letters<ol style="list-style-type: none"><li>12.1. Review Letter 1, dated June 28, 2024</li></ol></li><li>13. Applicant Response to City Review Letters</li></ol> |

## **INTRODUCTION**

### **I. Project Description**

The applicant has requested approval of a Critical Area Review 2 for the construction of a 316 square foot first floor addition which includes an Accessory Dwelling Unit and a 316 square foot second floor addition to an existing single-family residence and roof remodel on a site located within geologically hazardous areas.

The proposal consists of the following components:

1. A request to construct a 316 square foot first floor addition and 316 square foot second floor addition to an existing single-family residence subject to the standards of Mercer Island City Code (MICC) 19.07.160.

### **II. Site Description and Context**

1. The proposed activity is to occur at 7520 Mercer Terrace Drive, Mercer Island, WA 98040. The site is designated Single Family Residential (zoned R-9.6). Adjacent properties are within the R-9.6 and R-15 zones and contain residential uses. The subject site contains potential landslide and erosion geologically hazardous areas.

## **Findings of Fact & Conclusions of Law**

### **III. Application Procedure**

1. The application for a Critical Area Review 2 was received by the City of Mercer Island on March 4, 2024. The application was determined to be incomplete on March 11, 2024, and resubmitted on May 2, 2024. The application was determined to be complete on May 14, 2024.
2. Under MICC 19.15.030, Table A, applications for a Critical Area Review 2 must undergo Type III review. Type III reviews require notice of application (discussed below). A notice of decision is issued once the project review is complete.
3. The City of Mercer Island provided public notice of application for this Critical Area Review 2, as set forth in MICC 19.15.090. The comment period for the public notice period lasted for 30 days, from May 20, 2024 to June 19, 2024. The following methods were used for the public notice of application:
  - 1) A mailing sent to neighboring property owners within 300 feet of the subject parcel.
  - 2) A sign posted on the subject parcel.
  - 3) A posting in the City of Mercer Island's weekly permit bulletin.
4. No public comments were received during the public comment period.

### **IV. State Environmental Policy Act (SEPA)**

The proposal is categorically exempt from SEPA pursuant to WAC 197-11-800(1)(b)(i).

### **V. Consistency with the Critical Areas Code and Land Development Code**

1. MICC 19.07.070 lists requirements for disclosure and notice on title. The applicant shall disclose to the city the presence of critical areas on the development proposal site and any mapped or

identifiable critical areas within the distance equal to the largest potential required buffer applicable to the development proposal on the development proposal site.

- a. The owner of any property containing critical areas and/or buffers on which a development proposal is submitted, except a public right-of-way or the site of a permanent public facility, shall file a notice approved by the city with the records and elections division of King County. The notice shall inform the public of the presence of critical areas, buffers and/or mitigation sites on the property, of the application of the city's critical areas code to the property and that limitations on actions in or affecting such critical areas and/or buffers may exist. The notice shall run with the land in perpetuity.
- b. The applicant shall submit proof to the city that the notice has been recorded prior to approval of a development proposal for the property or, in the case of subdivisions, short subdivisions, and binding site plans, at or before recording of the final subdivision, short subdivision, or binding site plan.

**Staff Analysis:** The applicant submitted a Critical Areas Disclosure and Notice on Title, recorded with King County, WA on April 25, 2024 (**Exhibit 8**); therefore, this requirement is met.

2. MICC 19.07.090 describes the purpose and procedures by which the city will review and authorize development and verify consistency with this chapter.
  - a. Critical Area Review 2. The purpose of a critical area review 2 is to review critical area studies and mitigation plans in support of proposed buffer averaging and reduction of wetland and watercourse buffers.
  - b. Review timing and sequence.
    - A. When development and/or activity within a wetland, watercourse, fish and wildlife habitat conservation area or buffer associated with these critical area types is proposed, a critical area review 2 is required to be reviewed and approved prior to construction authorization.
    - B. When development and/or activity is proposed on a site containing only geologically hazardous areas, an application has the option of either:
      - i. Applying for a critical area review 2 in advance of construction permits, using the procedures required for a Type III land use review; or
      - ii. Requesting consolidation of the review of geologically hazardous areas together with construction permit review.
    - C. When development and/or activity is proposed on a site containing geologically hazardous areas and on or more of the critical area types listed in subsection (B)(2)(a) of this section or the associated buffer of one of those critical areas, a critical area review 2 reviewing all critical areas is required to be reviewed and approved prior to construction authorization, using the procedures required for a Type III land use review.

**Staff Analysis:** The subject property contains only geologically hazardous areas. The applicant submitted a Concurrent Review Request Form (**Exhibit 9**), requesting consolidation of the review of geologically hazardous areas together with construction permit review.

3. MICC 19.07.100 lists requirements for mitigation sequencing. An applicant for a development proposal or activity shall implement the following sequential measures, listed below in order of preference, to avoid, minimize, and mitigate impacts to environmentally critical areas and

associated buffers. Applicants shall document how each measure has been addressed before considering and incorporating the next measure in the sequence:

- a. Avoiding the impact altogether by not taking a certain action or parts of an action. The applicant shall consider reasonable, affirmative steps and make best efforts to avoid critical area impacts. However, avoidance shall not be construed to mean mandatory withdrawal or denial of the development proposal or activity if the proposal or activity is an allowed, permitted, or conditional use in this title. In determining the extent to which the proposal should be redesigned to avoid the impact, the code official may consider the purpose, effectiveness, engineering feasibility, commercial availability of technology, best management practices, safety and cost of the proposal and identified changes to the proposal. Development proposals should seek to avoid, minimize and mitigate overall impacts based on the functions and values of all of the relevant critical areas and based on the recommendations of a critical area study. If impacts cannot be avoided through redesign, use of a setback deviation pursuant to section 19.06.110(C), or because of site conditions or project requirements, the applicant shall then proceed with the sequence of steps in subsections B through E of this section;
- b. Minimizing impacts by limiting the degree or magnitude of the action and its implementation, using a setback deviation pursuant to section 19.06.110(C), using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;
- c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;
- e. Compensating for the impact by replacing, enhancing, or providing substitute resources or environments; and/or
- f. Monitoring the impact and taking appropriate corrective measures to maintain the integrity of compensating measures.

**Staff Analysis:** The Limited Geotechnical Evaluation (**Exhibit 4**) finds that the risk of erosion and landslide activity at the site is very low and will not be affected by the proposed development, provided the erosion control measures are in place during construction and all disturbed areas are landscaped following construction. The impact is minimized, and the proposed development takes affirmative steps to avoid impacts; therefore, mitigation sequencing has been incorporated and this requirement is met.

4. MICC 19.07.110 lists requirements for a critical area study. A critical area study is required when a development proposal will result in an alteration to one or more critical area buffers or when required to determine the potential impact to a critical area. The critical area study may be waived or modified if the applicant demonstrates that the development proposal will not have an impact on the critical area or its buffer in a manner contrary to the purposes and requirements of this chapter.

**Staff Analysis:** The Limited Geotechnical Evaluation (**Exhibit 4**) contains all of the requirements for a critical area study; therefore, this requirement is met.

5. MICC 19.07.160 lists standards for development on sites containing geologically hazardous areas.
  - A. Geologically hazardous areas are lands that are susceptible to erosion, landslides, seismic events, or other factors as identified by WAC 365-190-120. These areas may not be suited for development activities because they may pose a threat to public health and safety. Areas

susceptible to one or more of the following types of hazards shall be designated as geologically hazardous areas: landslide hazard areas, seismic hazard areas, and erosion hazard areas.

**Staff Analysis:** The subject property contains potential landslide and erosion hazard areas (**Exhibit 6**).

B. Alteration within geologically hazardous areas or associated buffers is required to meet the standards in this section, unless the scope of work is exempt pursuant to section 19.07.120, exemptions, or a critical area review 1 approval has been obtained pursuant to section 19.07.090(A).

1. When an alteration within a landslide hazard area, seismic hazard area or buffer associated with those hazards is proposed, the applicant must submit a critical area study concluding that the proposal can effectively mitigate risks of the hazard. The study shall recommend appropriate design and development measures to mitigate such hazards. The code official may waive the requirement for a critical area study and the requirements of subsections (B)(2) and (B)(3) of this section when he or she determines that the proposed development is minor in nature and will not increase the risk of landslide, erosion, or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area.

**Staff Analysis:** The Limited Geotechnical Evaluation (**Exhibit 4**) satisfies the requirements of a critical area study. The study finds that mitigation for the landslide and erosion hazards is not currently warranted. The hazards would not be affected by the proposed construction, provided erosion control measures are in place during construction. The study also provides recommendations for appropriate design and development measures to mitigate the hazards. Cobalt Geosciences, LLC provided a post-design memorandum (**Exhibit 5**) confirming that the proposed development is consistent with the recommendations in the Limited Geotechnical Evaluation; therefore, this requirement is met.

2. Alteration of landslide hazard areas and seismic hazard areas and associated buffers may occur if the critical area study documents find that the proposed alteration:
  - a. Will not adversely impact other critical areas;
  - b. Will not adversely impact the subject property or adjacent properties;
  - c. Will mitigate impacts to the geologically hazardous area consistent with best available science to the maximum extent reasonably possible such that the site is determined to be safe; and
  - d. Includes the landscaping of all disturbed areas outside of building footprints and installation of hardscape prior to final inspection.

**Staff Analysis:** The Limited Geotechnical Evaluation (**Exhibit 4**) finds that the proposed alteration will not adversely impact other critical areas, the subject property, or adjacent properties. The study finds that no mitigation is currently warranted at the site due to the nature of the proposed development, provided typical temporary erosion control measures are in place during construction and all areas are resurfaced with mulches/bark/compost and plantings or other landscaping following construction; therefore, these requirements are met, as conditioned.

3. Alteration of landslide hazard areas, seismic hazard areas and associated buffers may occur if the conditions listed in subsection (B)(2) of this section are satisfied and the geotechnical professional provides a statement of risk matching one of the following:
  - a. An evaluation of site-specific subsurface conditions demonstrates that the proposed development is not located in a landslide hazard area or seismic hazard area;
  - b. The landslide hazard area or seismic hazard area will be modified or the development has been designed so that the risk to the site and adjacent property is eliminated or mitigated such that the site is determined to be safe;
  - c. Construction practices are proposed for the alteration that would render the development as safe as if it were not located in a geologically hazardous area and do not adversely impact adjacent properties; or
  - d. The development is so minor as not to pose a threat to the public health, safety and welfare.

**Staff Analysis:** The Limited Geotechnical Evaluation (**Exhibit 4**) provides a statement of risk matching (c) above; therefore, this criteria is met.

- C. Development is allowed within landslide hazard areas and associated buffers, when the following standards are met:
  1. A critical area study shall be required for any alteration of a landslide hazard area or associated buffer;
  2. Buffers shall be applied as follows. When more than one condition applies to a site, the largest buffer shall be applied:
    - a. Buffer widths shall be equal to the height of a steep slope, but not more than 75 feet, and applied to the top and toe of slopes;
    - b. Shallow landslide hazard areas shall have minimum 25-foot buffers applied in all directions; and
    - c. Deep-seated landslide hazard areas shall have 75-foot buffers applied in all directions.

**Staff Analysis:** The Limited Geotechnical Evaluation (**Exhibit 4**) satisfies the requirements of a critical area study. The study finds that the risk of erosion and landslide activity at the site is very low and would not be affected by the proposed construction, provided the typical erosion control measures are in place during construction and all areas are landscaped following construction; therefore, these standards are met.

- D. When development is proposed within a seismic hazard area:
  1. A critical area study shall be required and shall include an evaluation by a qualified professional for seismic engineering and design, a determination of the magnitude of seismic settling that could occur during a seismic event, and a demonstration that the risk associated with the proposed alteration is within acceptable limits or that appropriate construction methods are provided to mitigate the risk of seismic settlement such that there will be no significant impact to life, health, safety, and property.
  2. Seismic hazard areas shall be identified by a qualified professional who references and interprets information in the U.S. Geological Survey Active Faults Database, performs on-site evaluations, or applies other techniques according to best available science.

3. When development is proposed on a site with an active fault, the follow provisions shall apply:
  - a. A 50-foot minimum buffer shall be applied from latest Quaternary, Holocene, or historical fault rupture traces as identified by the United States Geological Survey or Washington Geological Survey map databases or by site investigations by licensed geologic professionals with specialized knowledge of fault trenching studies; or
  - b. Mitigation sequencing shall be incorporated into the development proposal as recommended based on geotechnical analysis by a qualified professional to prevent increased risk of harm to life and/or property.

**Staff Analysis:** The subject property is not located within a seismic hazard area; therefore, these requirements do not apply.

- E. When development is proposed within an erosion hazard area:
  1. All development proposals shall demonstrate compliance with chapter 15.09, storm water management program.
  2. No development or activity within an erosion hazard area may create a net increase in geological instability on or off site.

**Staff Analysis:** The critical area review is occurring concurrently with review of the associated construction permit under Building Permit No. 2402-026. As conditioned, the proposed development is required to obtain all related permits. The construction permit has been reviewed and approved by Ruji Ding, Senior Development Engineer, for compliance with chapter 15.09, storm water management program. The Limited Geotechnical Evaluation (**Exhibit 4**) finds that the risk of erosion at the site resulting from the proposed construction is very low, provided that the typical erosion measures are implemented during construction and all disturbed areas are landscaped following construction; therefore, this requirement is met, as conditioned.

#### CONDITIONS OF APPROVAL

1. The project proposal shall be in substantial conformance with **Exhibit 2** and all applicable development standards contained within Mercer Island City Code (MICC) Chapter 19.07.
2. The applicant is responsible for documenting any required changes in the project proposal due to conditions imposed by any applicable local, state and federal government agencies.
3. Construction or substantial progress toward construction of a development for which a permit has been granted must be undertaken within three years after the approval of the permit or the permit shall terminate. The code official shall determine if substantial progress has been made.
4. Landscaping of all disturbed areas outside of building footprints and installation of hardscape is required prior to final inspection of the associated building permit.
5. The Seasonal Development Limitation restricts any land clearing, grading, filling, and foundation work between October 1st and April 1st on lots due to the critical slopes or geologic hazard (MICC 19.07.060).

#### DEVELOPMENT REGULATION COMPLIANCE – DISCLOSURE

1. The applicant is responsible for obtaining any required permits or approvals from the appropriate Local, State, and Federal Agencies.

2. All required permits must be obtained prior to the commencement of construction.

## DECISION

Based upon the above noted Findings of Fact and Conclusions of Law, Critical Area Review 2 application **CAO24-003**, as depicted in **Exhibit 2**, is hereby **APPROVED**. This decision is final, unless appealed in writing consistent with adopted appeal procedures, MICC 19.15.130(A), and all other applicable appeal regulations.

Approved this 4th day of November, 2024



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**Molly McGuire**  
**Senior Planner**  
**Community Planning & Development**  
**City of Mercer Island**

# CITY OF MERCER ISLAND

## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | [www.mercerisland.gov](http://www.mercerisland.gov)



### CITY USE ONLY

PROJECT#

RECEIPT #

FEE

Date Received:

Received By:

### DEVELOPMENT APPLICATION

|                                                                            |                                                                       |                                                                               |  |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------|--|
| STREET ADDRESS/LOCATION<br>7520 Mercer Terrace Dr, Mercer Island, WA 98040 |                                                                       | ZONE<br>R-9.6 SINGLE FAMILY RESIDENTIAL                                       |  |
| COUNTY ASSESSOR PARCEL #'S<br>545360-0100                                  |                                                                       | PARCEL SIZE (SQ. FT.)<br>9,701                                                |  |
| PROPERTY OWNER (required)<br>Rodolfo Hernandez McIntyre                    | ADDRESS (required)<br>7520 Mercer Terrace Dr, Mercer Island, WA 98040 | CELL/OFFICE (required)<br>206-291-8329<br>E-MAIL (required)<br>rodolfo@kw.com |  |
| PROJECT CONTACT NAME<br>Diego Pineda                                       | ADDRESS<br>31212 1st PI SW, Federal Way, WA 98023                     | CELL/OFFICE<br>206-771-5014<br>E-MAIL<br>diego@buildstuffstudios.com          |  |
| TENANT NAME                                                                | ADDRESS                                                               | CELL PHONE<br><br>E-MAIL                                                      |  |

**DECLARATION:** I HEREBY STATE THAT I AM THE OWNER OF THE SUBJECT PROPERTY OR I HAVE BEEN AUTHORIZED BY THE OWNER(S) OF THE SUBJECT PROPERTY TO REPRESENT THIS APPLICATION, AND THAT THE INFORMATION FURNISHED BY ME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

SIGNATURE

01/29/2024  
DATE

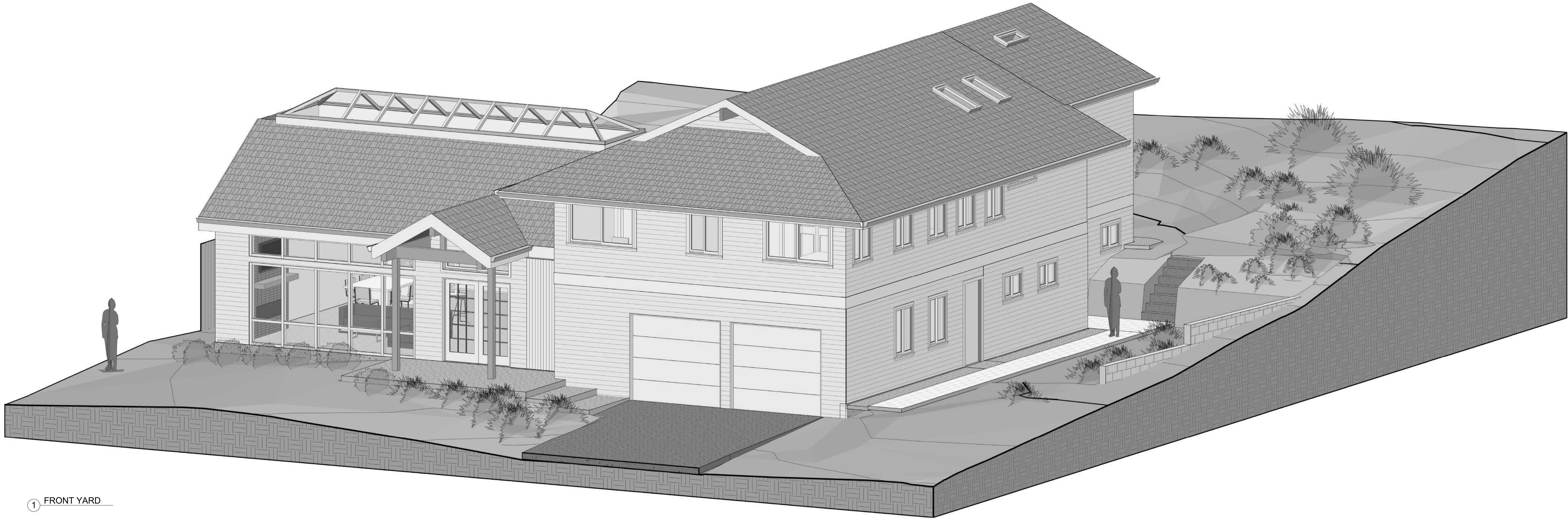
### PROPOSED APPLICATION(S) AND CLEAR DESCRIPTION OF PROPOSAL (PLEASE USE ADDITIONAL PAPER IF NEEDED):

Roof remodel, demo existing lower roof line and reconstruction maintaining the existing footprint with a new design. 2-story addition, 632 SF of conditioned gross floor area and 316 SF total lot coverage. 316 SF ADU on level 1 and 316 SF addition to the existing bedroom on level 2. The proposed addition is in a geo-hazard area on the site.

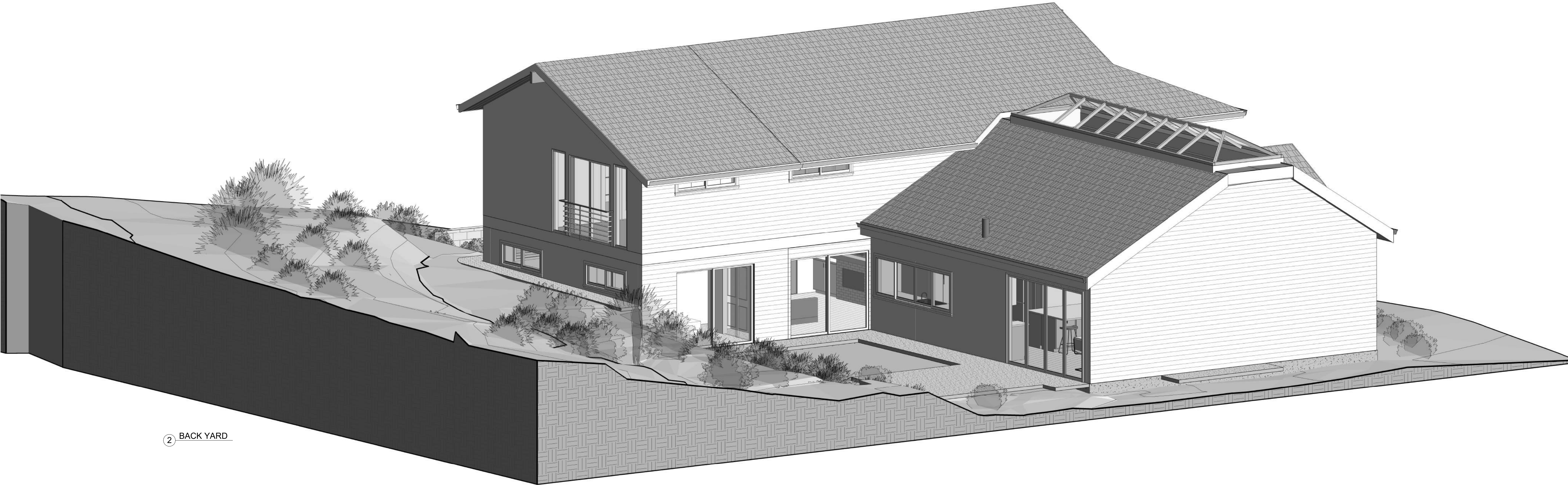
ATTACH RESPONSE TO DECISION CRITERIA IF APPLICABLE

### CHECK TYPE OF LAND USE APPROVAL REQUESTED:

| CRITICAL AREAS                                                                                     | ENVIRONMENTAL REVIEW (SEPA)                                           | SUBDIVISION                                                                 |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> Critical Area Review 1                                                    | <input type="checkbox"/> SEPA Review                                  | <input type="checkbox"/> Short Plat- Preliminary                            |
| <input checked="" type="checkbox"/> Critical Area Review 2                                         | <input type="checkbox"/> Environmental Impact Statement               | <input type="checkbox"/> Short Plat- Alteration                             |
|                                                                                                    |                                                                       | <input type="checkbox"/> Short Plat- Final Plat                             |
| DESIGN REVIEW                                                                                      |                                                                       | <input type="checkbox"/> Long Plat- Preliminary                             |
| <input type="checkbox"/> Design Review – Signs                                                     | LEGISLATIVE                                                           | <input type="checkbox"/> Long Plat- Alteration                              |
| <input type="checkbox"/> Design Review – Code Official                                             | <input type="checkbox"/> Code Amendment                               | <input type="checkbox"/> Long Plat- Final Plat                              |
| <input type="checkbox"/> Design Commission Study Session                                           | <input type="checkbox"/> Comprehensive Plan Docket Application        | <input type="checkbox"/> Lot Line Revision                                  |
| <input type="checkbox"/> Design Commission Review – Exterior Alteration                            | <input type="checkbox"/> Comprehensive Plan Application (If Docketed) |                                                                             |
| <input type="checkbox"/> Design Commission Review – Major New Construction                         | <input type="checkbox"/> Rezone                                       |                                                                             |
|                                                                                                    | OTHER LAND USE                                                        |                                                                             |
|                                                                                                    | <input checked="" type="checkbox"/> Accessory Dwelling Unit           |                                                                             |
|                                                                                                    | <input type="checkbox"/> Code Interpretation Request                  |                                                                             |
| DEVIATIONS                                                                                         | <input type="checkbox"/> Conditional Use (CUP)                        | WIRELESS COMMUNICATION FACILITIES                                           |
| <input type="checkbox"/> Deviations to Antenna Standards – Code Official                           | <input type="checkbox"/> Noise Exception Type I - IV                  | <input type="checkbox"/> New Wireless Communication Facility                |
| <input type="checkbox"/> Deviations to Antenna Standards – Design Commission                       | <input type="checkbox"/> Other Permit/Services Not Listed             | <input type="checkbox"/> Wireless Communications Facilities- 6409 Exemption |
| <input type="checkbox"/> Public Agency Exception                                                   | SHORELINE MANAGEMENT                                                  | <input type="checkbox"/> Small Cell Deployment                              |
| <input type="checkbox"/> Reasonable Use Exception                                                  | <input type="checkbox"/> Shoreline Exemption                          | <input type="checkbox"/> Height Variance                                    |
| <input type="checkbox"/> Variance                                                                  | <input type="checkbox"/> Shoreline Substantial Development Permit     |                                                                             |
| <input type="checkbox"/> Seasonal Development Limitation Waiver – Wet Season Construction Approval | <input type="checkbox"/> Shoreline Variance                           |                                                                             |
|                                                                                                    | <input type="checkbox"/> Shoreline Conditional Use Permit             |                                                                             |
|                                                                                                    | <input type="checkbox"/> Shoreline Permit Revision                    |                                                                             |



① FRONT YARD



② BACK YARD

## BUILD STUFF

BUILD STUFF LLC  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |      |          |             |
|----------------|------|----------|-------------|
| Revision #     | Date | Revision | Description |
|                |      |          |             |
|                |      |          |             |
|                |      |          |             |
|                |      |          |             |
|                |      |          |             |

**HERNANDEZ RESIDENCE**  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #:

2402-026

Date:

09/19/24

PROPOSED 3D AXON

A001

Scale:

ABBREVIATIONS:

|                                                                                                                                                         |                                                                                                                                                                                                                                                                                                     |                                                                                                                                              |                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| &<br><<br>@<br>Ø<br>#<br>(E)<br>CL                                                                                                                      | AND<br>ANGLE<br>AT<br>DIAMETER<br>POUND OR NUMBER<br>EXISTING<br>CENTERLINE                                                                                                                                                                                                                         | M<br>MATL<br>MAX<br>MC<br>MECH<br>MEMB<br>MFR<br>MIN<br>MIR<br>MISC<br>MH<br>MO<br>MTD<br>MTL<br>MULL                                        | MEN'S<br>MATERIAL<br>MAXIMUM<br>MEDICINE CABINET<br>MECHANICAL<br>MEMBRANE<br>MANUFACTURER<br>MINIMUM<br>MIRROR<br>MISCELLANEOUS<br>MANHOLE<br>MASONRY OPENING<br>MOUNTED<br>METAL<br>MULLION                                                             |
| A.B.<br>ABV<br>AC<br>ACT<br>ACU<br>ADJ<br>AFF<br>ALT<br>ALUM<br>APPROX                                                                                  | ANCHOR BOLT<br>ABOVE<br>AIR CONDITIONING<br>ACOUSTIC CEILING TILE<br>AIR CONDITION UNIT<br>ADJUSTABLE<br>ABOVE FINISHED FLOOR<br>ALTERNATE<br>ALUMINUM<br>APPROXIMATELY                                                                                                                             | N<br>NA<br>NIC<br>NOM<br>NTS<br>NR                                                                                                           | NORTH<br>NOT APPLICABLE<br>NOT IN CONTRACT<br>NOMINAL<br>NOT TO SCALE<br>NOT RATED                                                                                                                                                                        |
| BLDG<br>BLW<br>B.O.                                                                                                                                     | BUILDING<br>BELOW<br>BOTTOM OF                                                                                                                                                                                                                                                                      | OA<br>OBS<br>O.C.<br>O.D.<br>OH<br>OFF<br>OPNG<br>OPP<br>PC<br>PL<br>PLAS<br>PLY<br>P.LAM<br>PNT<br>PR<br>PSL<br>PTN                         | OVERALL<br>OBSCUR<br>ON CENTER<br>OUTSIDE DIAMETER<br>OVERHANG<br>OFFICE<br>OPENING<br>OPPOSITE<br>PRECAST CONCRETE<br>PLATE<br>PLASTER<br>PLYWOOD<br>PLASTIC LAMINATE<br>PAINT<br>PAIR<br>PARALLEL STRAND LUMBER<br>PRESSURE TREATED<br>PARTITION        |
| CB<br>CBB<br>CEM<br>CJ<br>CL<br>CLG<br>CLR<br>CO<br>COL<br>CONC<br>COND<br>CONT<br>CPT<br>CT<br>CS                                                      | CATCH BASIN<br>CEMENT BACKER BOARD<br>CEMENT<br>CONTROL JOINT<br>CENTERLINE<br>CEILING<br>CLEAR<br>CLEAN OUT<br>COLUMN<br>CONCRETE<br>CONDITION<br>CONTINUOUS<br>CARPET<br>CERAMIC TILE<br>COMPOSITE SIDING                                                                                         | QT                                                                                                                                           | QUARRY TILE                                                                                                                                                                                                                                               |
| DBL<br>DEMO<br>DF<br>DIA<br>DIFF<br>DIM<br>DISP<br>DN<br>DRDS<br>DTL<br>DW                                                                              | DOUBLE<br>DEMOLISH<br>DRINKING FOUNTAIN<br>DIAMETER<br>DIFFUSER<br>DIMENSION<br>DISPENSER<br>DOWN DOOR<br>DOWNSPOUT<br>DETAIL<br>DISHWASHER                                                                                                                                                         | R, RAD<br>RB<br>RCP<br>RD<br>REF<br>REFR<br>REIN<br>RELOC<br>REQ'D<br>RES<br>RM<br>RO<br>RV<br>RL                                            | RADIUS<br>RESILIENT BASE<br>REFLECTED CEILING PLAN<br>ROOF DRAIN<br>REFERENCE<br>REFRIGERATOR<br>REINFORCED<br>RELOCATE<br>REQUIRED<br>RESILIENT<br>ROOM<br>ROUGH OPENING<br>ROOF VENT<br>RAIN WATER LEADER                                               |
| E<br>EA<br>EF<br>EJ<br>EL<br>ELEC<br>ELEV<br>EMERG<br>EQ<br>EXP                                                                                         | EAST<br>EACH<br>EXHAUST FAN<br>EXPANSION JOINT<br>ELEVATION<br>ELECTRICAL<br>ELEVATOR<br>EMERGENCY<br>EQUAL<br>EXPANSION                                                                                                                                                                            | S<br>SA<br>SC<br>SCHED<br>SECT<br>SG<br>SHT<br>SIM<br>SPEC<br>SQ<br>S.S.<br>STA<br>STD<br>STL<br>STN<br>STOR<br>STRUCT<br>SOG<br>SUSP<br>SYM | SOUTH<br>SMOKE ALARM<br>SOLID CORE<br>SCHEDULE<br>SECTION<br>SAFETY GLASS<br>SHEET<br>SIMILAR<br>SPECIFICATION<br>SQUARE<br>STAINLESS STEEL<br>STATION<br>STANDARD<br>STEEL<br>STAIN<br>STORAGE<br>STRUCTURE<br>SLAB ON GRADE<br>SUSPENDED<br>SYMMETRICAL |
| FBP<br>FD<br>FE<br>FF<br>FH<br>FIN<br>FLR<br>F.O.<br>FOIC                                                                                               | FIBER BOARD PANEL<br>FLOOR DRAIN<br>FIRE EXTINGUISHER<br>FINISH FLOOR<br>FIRE HYDRANT<br>FINISH<br>FLOOR<br>FACE OF<br>FURNISHED BY OWNER,<br>INSTALL BY CONTRACTOR<br>FURNISHED BY OWNER<br>INSTALL BY OWNER<br>FIRE RESISTANT<br>FLOOR SINK                                                       | T, TMP<br>T&G<br>TEL<br>TER<br>THK<br>T.O.<br>TS<br>TV<br>TYP                                                                                | TEMPERED<br>TONGUE & GROOVE<br>TELEPHONE<br>TERRAZZO<br>THICK<br>TOP OF<br>TUBE STEEL<br>TELEVISION<br>TYPICAL                                                                                                                                            |
| GA<br>GALV<br>GB<br>GL<br>GLB<br>GND GR<br>GRT'D<br>GWB                                                                                                 | GAUGE<br>GALVANIZED<br>GRAB BAR<br>GLASS<br>GLU-LAM BEAM<br>GROUND GRADE GROUTED<br>GYPSUM WALL BOARD                                                                                                                                                                                               | UNO                                                                                                                                          | UNLESS NOTED OTHERWISE                                                                                                                                                                                                                                    |
| HB<br>HC<br>HCMU<br>HDWD<br>HDWE<br>HT<br>HM<br>HR<br>HORIZ<br>I.D.<br>INSUL<br>INT<br>JAN<br>JT<br>KIT<br>LAB<br>LAM<br>LAV<br>LKR<br>LOC<br>LT<br>LVL | HOSE BIBB<br>HANDICAP<br>HOLLOW CLAY MASONRY UNIT<br>HARDWOOD<br>HARDWARE<br>HEIGHT<br>HOLLOW METAL<br>HOUR<br>HORIZONTAL<br>INSIDE DIAMETER<br>INSULATION<br>INTERIOR<br>JANITOR<br>JOINT<br>KITCHEN<br>LABORATORY<br>LAMINATE<br>LAVATORY<br>LOCKER<br>LOCATE<br>LIGHT<br>LAMINATED VENEER LUMBER | W<br>W/<br>WC<br>WD<br>WF<br>W/O<br>WOM<br>WM<br>WP<br>WR<br>WSCT<br>WT                                                                      | WEST<br>WITH<br>WATER CLOSET<br>WOOD<br>WIDE FLANGE<br>WITHOUT<br>WALK OFF MAT<br>WOMEN'S<br>WATERPROOFING<br>WATER RESISTANT<br>WAINSCOT<br>WEIGHT                                                                                                       |

GENERAL CODE REQUIREMENTS:

**CODES:**  
ALL WORK SHALL COMPLY WITH THE CURRENT CODES:

-2018 INTERNATIONAL RESIDENTIAL CODE (IRC)  
-2018 INTERNATIONAL MECHANICAL CODE (IMC)  
-2018 UNIFORM PLUMBING CODE (UPC)  
-2020 WASHINGTON CITIES ELECTRICAL CODE (WCEC)  
-2018 INTERNATIONAL FIRE CODE (IFC)  
-2018 WASHINGTON STATE ENERGY CODE (WSEC)  
-ALL OTHER APPLICABLE CODES WITH LOCAL AMENDMENTS

**PRESCRIPTIVE INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT: (TABLES R402.1.1 AND 402.1.3 AND 40353 FOR PIPING)**  
CLIMATE ZONE 5 AND MARINE 4

|                                |     |
|--------------------------------|-----|
| FENESTRATION U-FACTOR-----     | .30 |
| WINDOWS VERTICAL U-FACTOR----- | .30 |
| DOORS SOLID U-FACTOR-----      | .30 |
| SKYLIGHTS U-FACTOR-----        | .50 |

**INSULATION VALUES**

|                                         |                                      |
|-----------------------------------------|--------------------------------------|
| CEILINGS W/ ATTICS-----                 | R49                                  |
| CEILINGS VAULTED - SCISSOR TRUSSES----- | R38                                  |
| CEILINGS VAULTED - SINGLE RAFTER-----   | R38                                  |
| WALLS ABOVE GRADE (2X6)-----            | R21 INT                              |
| WALLS BELOW GRADE-----                  | 10/15/21 INT + 5TB                   |
| FLOORS-----                             | R30                                  |
| SLAB ON GRADE-----                      | R10, 2FT PERIMETER                   |
| EXT. WALL HEADERS-----                  | R10 WHERE HEADERS ARE NOT FULL WIDTH |

MECHANICAL PIPE INSULATION----- R-6 (WRAPPED)  
HOT WATER PIPE (ALL LOCATIONS)----- R-3 (OK DISCONT. THROUGH STRUCT. MEMBERS (PER 403.5.3)

ALL FENESTRATION TO BE NFRC-CERTIFIED.  
FOR SINGLE RAFTER OR JOIST-VAULTED CEILINGS, THE INSULATION MAY BE REDUCED TO R- 38 IF THE FULL INSULATION DEPTH EXTENDS OVER THE TOP PLATE OF THE EXTERIOR WALL.

**MODIFIED PRESCRIPTIVE VALUES AT ADDITION PER CREDIT OPTION (1.3)**  
VERTICAL FENESTRATION = U-FACTOR: (.28)  
FLOORS - R-38  
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB BELOW GRADE  
SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB

**ENERGY CODE REQUIREMENTS (PER 2018 WSEC RESIDENTIAL PROVISIONS): PRESCRIPTIVE REQUIREMENTS (CREDIT OPT. PER COVERSHEET A000):**  
401.3 A PERMANENT ENERGY COMPLIANCE CERTIFICATE SHALL BE POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM, OR AN APPROVED LOCATION INSIDE THE BUILDING AND INCLUDING THE FOLLOWING: PREDOMINATE R-VALUES, U-VALUE, OR FENESTRATION, RESULTS FROM DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING, AND EFFICIENCIES OF HTG/COOLING/WATER HEATING EQUIPMENT.

**AIR LEAKAGE TESTING PER (WSEC R402.4.1.2)** THE DWELLING SHALL BE TESTED AND VERIFIED AIR LEAKAGE RATE OF NOT EXCEEDING 5 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF 0.2" w.g. (50 PASCALS). JOINTS AND SEAMS SHALL COMPLY WITH (IRC SECTION M1601.4). PROVIDE A WRITTEN REPORT OF THE TEST RESULTS, SIGNED BY THE TESTING PARTY, TO THE BUILDING INSPECTOR, PRIOR TO APPROVED FINAL INSPECTION.

**SOILS & EXCAVATION WORK:**  
REFER TO GEOTECH REPORT DATED 08.22.23 FOR GEO-HAZARD MITIGATION STRATEGIES AND RECOMMENDATIONS ON EXCAVATION, AND FOUNDATION BACKFILL.

**TREE REQUIREMENTS:**  
REFER TO ARBORIST REPORT DATED 11.10.23 FOR TREE PROTECTION PLAN, TREE INVENTORY, AND REPLACEMENT REQUIREMENTS. TREE RETENTION AND REPLACEMENT PLANS PER SHEET L102 & L103

**HAZMAT:**  
HAZARDOUS MATERIAL REMOVAL & DISPOSAL: BEFORE COMMENCING ANY DEMOLITION OR OTHER WORK, COMPLY WITH DOCUMENTS PREPARED BY THE OWNER'S HAZARDOUS MATERIALS CONSULTANT. APPLIES TO DEMOLITION, DISPOSAL AND CONSTRUCTION OPERATIONS ASSOCIATED WITH THE PROJECT.

**DEMOLITION:**  
ITEMS INDICATED ON PLANS TO BE DEMOLISHED, SHALL BE COMPLETELY REMOVED AND DISPOSED UNLESS NOTED OTHERWISE.  
CONTRACTOR/OWNER RESPONSIBLE FOR REVIEW OF THE HAZARDOUS MATERIALS ABATEMENT, REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS IF APPLICABLE FOR CUTTING AND PATCHING WORK.

**PLUMBING | MECHANICAL | ELECTRICAL INSTALLATION**  
ALL PLUMBING, MECHANICAL, AND ELECTRICAL PERMITS SHALL BE OBTAINED SEPARATELY FROM THE BUILDING PERMIT AS NECESSARY AND SHALL COORDINATE REQUIRED INSPECTIONS.

**FIRE AND DRAFT STOPS (PER IRC R302.11 AND R302.12)**  
FIREBLOCKING PROVIDED TO CUT OFF BOTH VERTICAL AND HORIZONTAL CONCEALED DRAFT OPENINGS AND TO FORM A FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.  
DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQUARE FEET. FIRE BLOCKS SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS, INCLUDING STAIRS, TUBS, SHOWERS, FIREPLACES, BALLOON FRAMED WALLS, FURRED WALLS, VOIDS, SOFFITS, ETC.

**NATURAL LIGHT (PER IRC R303):**  
ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF MINIMUM 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS.  
EXCEPT, IN ROOMS WHERE ARTIFICIAL LIGHT IS PROVIDED WITH AN AVERAGE ILLUMINATION OF 6 FOOTCANDLES (65 LUX) OVER THE AREA OF THE ROOM AT A HEIGHT OF 30 INCHES ABOVE THE FLOOR LEVEL.

GENERAL CODE REQUIREMENTS:

**BUILDING SEPARATION REQUIREMENTS: (PER IRC R302.1)**  
ONE HOUR WALL IS REQUIRED IF LESS THAN 5' FROM THE PROPERTY LINE. NO OPENINGS ALLOWED IN WALLS LESS THAN 3' FROM PROPERTY LINE  
EAVES CAN EXTEND NO CLOSER THAN 2' TO PROPERTY LINE, WHERE EAVES EXTEND AT 5' OR LESS TO PROPERTY LINE FIRE-BLOCKING SHALL BE PROVIDED FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING. GABLES ENDING AT 5' OR LESS TO PROPERTY LINE SHALL NOT HAVE GABLE VENT OPENINGS INSTALLED. EAVES/SOFFIT VENTS NOT ALLOWED AT 5' OR LESS FROM PROPERTY LINE.

**GARAGE / HOUSE REQUIREMENTS (PER IRC R302.5 AND TABLE R302.6)**  
1/2" REGULAR GYP BOARD SHALL BE INSTALLED ON THE GARAGE SIDE AT WALLS SEPERATING GARAGE AND DWELLING.  
GARAGE CEILINGS WITH DWELLING ABOVE REQUIRES INSTALLATION OF 5/8" "TYPE X" GYPSUM BOARD. SUPPORTING STRUCTURE REQ. 1/2" REGULAR GYP BOARD.DOOR (PER IRC R302.5.1) 1-3/8" THICK SOLID CORE OR 20 MIN. DOOR SHALL BE INSTALLED BETWEEN GARAGE AND DWELLING

**CEILING HEIGHT (PER IRC R305):**  
HABITABLE SPACE, HALLWAYS AND BASEMENTS CONTAINING THESE SPACES SHALL HAVE A MINIMUM CEILING HEIGHT OF 7 FEET. BATHROOMS, TOILET ROOMS AND LAUNDRY ROOMS SHALL HAVE A MIN CEILING HEIGHT OF 6 FEET 8 INCHES. EXCEPTIONS: ROOMS WITH SLOPED CEILINGS, FLOOR AREA OF THE ROOM TO HAVE A MIN CEILING HEIGHT OF 5 FEET AND MIN 50 PERCENT OF THE FLOOR AREA SHALL HAVE A MIN CEILING HEIGHT OF 7 FEET.

**BATH FIXTURE SPACE REQUIRED (PER IRC R307.1)**  
FIXTURES SHALL BE SPACED IN ACCORDANCE WITH FIGURE R307.1, AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE PLUMBING CODE SECTION 402.5.

**BATHTUB AND SHOWER SPACES (PER IRC R307.2)**  
TUB/SHOWER SURROUND WALLS TO HAVE FIBER-CEMENT BACKER BOARD AND FINISHED WITH A SMOOTH NON-ABSORBENT SURFACE TO A MINIMUM HEIGHT OF 72" ABOVE THE FLOOR.

**SAFETY GLAZING (PER IRC R308.1)**  
ALL SIDE-LITES, SLIDING GLASS DOORS, AND TUB/SHOWER ENCLOSURE IN WET AREAS TO COMPLY WITH SAFETY GLAZING REQUIREMENTS.

**GLAZING AND WET SURFACES (PER IRC R308.4.5)**  
GLAZING IN WALLS, ENCLOSURES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND SIMILAR, WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE CONSIDERED A HAZARDOUS LOCATION. APPLIES TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING.

**EMERGENCY ESCAPE AND RESCUE OPENINGS (PER IRC R310)**  
REQ'D IN BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE A MINIMUM OF ONE OPERABLE EMERGENCY ESCAPE AND RESCUE OPENING. OPENING MUST BE OPERABLE EXTERIOR WINDOW, DOOR OR SIMILAR. EGRESS WINDOW: MINIMUM NET CLEAR OPENING OF 5.7 SF SQFT. MIN NET CLEAR HEIGHT SHALL BE 24". MIN NET CLEAR WIDTH SHALL BE 20". MAX FINISHED SILL HEIGHT ABOVE FLOOR SHALL BE 44".  
WHERE THE SILL OF A WINDOW IS GREATER THAN 72" ABOVE FINISHED GRADE, MINIMUM SILL HEIGHT ABOVE FINISH FLOOR SHALL BE 24" OR BE PROVIDED WITH A WINDOW FALL PREVENTION DEVICE (PER IRC R312.2).  
DOORS SHALL BE A SIDE-HINGED DOOR OR A SLIDER. WINDOW WELLS AND AREA WELLS FOR DOORS REQUIRED WHEN THE OPENING IS BELOW THE ADJACENT GRADE.

**EGRESS DOORS (PER IRC R311.2)**  
MINIMUM ONE EGRESS DOOR PROVIDED FOR EACH DWELLING UNIT. SHALL BE SIDE-HINGED, AND PROVIDE A CLEAR WIDTH OF MIN 32 INCHES. MEASURED BETWEEN THE FACE OF THE DOOR AND THE STOP, WITH THE DOOR OPEN 90 DEGREES (1.57 RAD).  
CLEAR HEIGHT OF DOOR OPENING SHALL BE MIN 78 INCHES MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP. EGRESS DOORS SHALL BE READILY OPENABLE FROM INSIDE THE DWELLING WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

**STAIRWAYS (PER IRC R311.7)**  
HEADROOM IN STAIRWAYS SHALL BE MINIMUM 6 FEET 8 INCHES. MIN WIDTH IS 36". MAX RISER IS 7-3/4".  
MIN TREAD RUN IS 10". MIN HEAD CLEARANCE IS 6'-8".  
HANDRAIL SHALL BE BETWEEN 34" TO 38" ABOVE TREAD NOSING.  
NOSING AT TREADS, LANDINGS, AND FLOORS OF STAIRWAYS PER R311.7.5.3 TYPE I. HANDRAILS: CIRCULAR HANDRAIL W/ DIAMETER OF MIN 1 1/4 INCHES AND MAX 2 INCHES. NON CIRCULAR HANDRAIL W/ PERIMETER OF MIN 4 INCHES AND MAX 61/4 INCHES, AND CROSS SECTION OF MAX 2 1/4 INCHES. EDGE RADIUS OF MIN 0.01 INCH.

**GUARDS (PER IRC R312.1)**  
GUARDS PROVIDED FOR OPEN-SIDED WALKING SURFACES, INCLUDING STAIRS, RAMPS AND LANDINGS. LOCATED MORE THAN 30 INCHES MEASURED VERTICALLY TO THE FLOOR OR GRADE BELOW AT ANY POINT WITHIN 36 INCHES HORIZONTALLY TO THE EDGE OF THE OPEN SIDE.  
REQUIRED HEIGHT: MAX 36 INCHES AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE NOSINGS.  
MAX OPENINGS: FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT THAT ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER.  
MAX OPENINGS AT STAIRS: THE TRIANGULAR OPENINGS AT THE OPEN SIDE OF STAIR, FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD, SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER.  
GUARDS ON THE OPEN SIDE OF STAIRS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 43/8 INCHES IN DIAMETER.

**GYPSUM WALL BOARD (PER IRC R702.3)**  
PER TABLE R702.3.5 MINIMUM THICKNESS AND APPLICATION OF GYPSUM BOARD AND GYPSUM PANEL PRODUCTS. SUPPORTS AND FASTENERS SHALL COMPLY WITH TABLE R702.3.5. SHALL BE APPLIED AT RIGHT ANGLES OR PARALLEL TO FRAMING MEMBERS. INTERIOR GYPSUM BOARD SHALL NOT BE INSTALLED WHERE IT IS DIRECTLY EXPOSED TO THE WEATHER OR TO WATER.

**FACTORY BUILT FIREPLACES (PER IMC SECTION 903)**  
SHALL BE LISTED, LABELED AND INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING. SHALL BE TESTED IN ACCORDANCE WITH UL 127. OUTSIDE COMBUSTION AIR REQ'D. (MIN 6 SQ. IN.) DUCTED DIRECTLY TO THE FIREBOX W/OPERABLE OUTSIDE DAMPER, TIGHTLY FITTING FLUE DAMPER, AND TIGHT FITTING GLASS OR METAL DOORS OR FLUE DRAFT INDUCTION FAN.

GENERAL CODE REQUIREMENTS:

**NFPA 72 MONITORED FIRE ALARM SYSTEM:**  
A NFPA 72- CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

**CARBON MONOXIDE ALARM & COMBINED ALARMS (PER IRC R315):**  
CO ALARM SHALL MEET UL LISTING 2034. COMBINATION CO-SMOKE ALARM SHALL ALSO MEET UL 217.TO BE POWERED BY INTERCONNECTED BUILDING WIRING AND PROVIDED W/ BATTERY BACKUP AND INSTALLED PER MFG LISTING. TO BE PROVIDED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

**CRAWL SPACE VENTILATION (PER IRC R408)**  
MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 S.F. FOR EACH 300 S.F. OF UNDER FLOOR AREA. VENTILATION OPENINGS SHALL PROVIDE INSECT AND CORROSION PROTECTION WHERE THE LEAST DIM OF THE COVERING SHALL NOT EXCEED 1/4". ONE SUCH VENTILATING OPENING SHALL BE WITHIN 3 FEET OF EACH CORNER OF THE BUILDING. VENTILATION OPENINGS NOT REQ'D GIVEN, AN APPROVED GLASS | VAPOR RETARDER MATERIAL SHALL BE INSTALLED OVER THE GROUND SURFACE AND CONTINUOUSLY OPERATED MECHANICAL EXHAUST VENTILATION IS PROVIDED AT A RATE EQUAL TO 1 CUBIC FOOT PER MINUTE FOR EACH 50 SQUARE FEET OF CRAWLSPACE FLOOR AREA.

**ROOF VENTILATION (PER IRC R806)**  
**ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES: (PER R806.1)**  
OPENINGS DIMENSION MIN 1/16 INCH AND MAX 1/4 INCH. OPENINGS LARGER THAN 1/4 INCH PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR WITH MIN OPENINGS DIMENSION OF 1/16 INCH MINIMUM AND 1/4 INCH MAX. VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND BE PROTECTED TO PREVENT THE ENTRY OF CREATURES.  
MIN NET FREE VENTILATION AREA SHALL BE 1/300 PROVIDED:  
NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQ'D VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. SHALL BE LOCATED NOT MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, BALANCE OF REQ'D VENTILATION IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION MORE THAN 3 FEET BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE. EAVE BAFFLES PROVIDING MIN 1" CLEARANCE SHALL BE PROVIDED FOR FREE FLOW OF AIR BETWEEN THE INSULATION AND THE ROOF SHEATHING AND THE LOCATION OF THE VENT. CROSS VENTILATION REQ'D.

**UNVENTED ENCLOSED ROOF FRAMING ASSEMBLIES: (PER R806.5)**  
IN CLIMATE ZONES 5, 6, 7 AND 8, ANY AIR-IMPERMEABLE INSULATION SHALL BE A CLASS II VAPOR RETARDER, OR SHALL HAVE A CLASS II VAPOR RETARDER COATING OR COVERING IN DIRECT CONTACT WITH THE UNDERSIDE OF THE INSULATION.

**ATTIC ACCESS (PER IRC R807)**  
ATTIC ACCESS WITH A VERTICAL HEIGHT OF 30" OR GREATER OVER AN AREA OF 30 S.F. MIN. MUST HAVE A MINIMUM ATTIC ACCESS OPENING OF 22" X 30"

**EXHAUST SYSTEMS - OUTDOOR DISCHARGE (PER M1501.1)**  
AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED TO THE OUTDOORS IN ACCORDANCE WITH SECTION M1504.3. AIR SHALL NOT BE EXHAUSTED INTO AN ATTIC, SOFFIT, RIDGE VENT OR CRAWL SPACE.

**M1504.3 EXHAUST OPENINGS:**  
AIR EXHAUST OPENINGS TERMINATION:  
NOT LESS THAN 3 FEET FROM PROPERTY LINES.  
NOT LESS THAN 3 FEET FROM GRAVITY AIR INTAKE OPENINGS, OPERABLE WINDOWS AND DOORS.  
NOT LESS THAN 10 FEET FROM MECHANICAL AIR INTAKE OPENINGS UNLESS SPECIFIED OTHERWISE BY THE MANUFACTURER'S INSTRUCTIONS  
**M1505.4 WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM:**  
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH SECTIONS M1505.4.1 THROUGH M1505.4.4.  
**M1505.4.3 MECHANICAL VENTILATION RATE**  
WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL PROVIDE OUTDOOR AIR AT A CONTINUOUS RATE AS DETERMINED IN ACCORDANCE WITH TABLE M1505.4.3(1) OR EQUATION 15-1.  
**M1505.4.4 LOCAL EXHAUST RATES**  
LOCAL EXHAUST SYSTEMS SHALL HAVE THE MINIMUM AIRFLOW RATE DETERMINED IN ACCORDANCE WITH TABLE M1505.4.4(1). LOCAL EXHAUST FANS INCLUDED IN THE WHOLE-HOUSE VENTILATION SYSTEM, IN ACCORDANCE WITH SECTION 1505.4.1. THE EXHAUST FAN SHALL BE CONTROLLED TO OPERATE AS SPECIFIED IN SECTION M1505.4.2.PRESCRIPTIVE EXHAUST DUCT SIZING PER TABLE M1505.4.4(2)

**OWNER/CONTRACTOR NOTES:**

1.CONTRACTOR / OWNER TO INSPECT SITE PRIOR TO STARTING CONSTRUCTION AND SHALL REPORT ANY DISCREPANCY TO THE DESIGNER. ANY QUESTIONS SHOULD BE DIRECTED THE DESIGNER TO CROSS REFERENCE WITH CITY APPROVED PLANS FOR ANY CHANGES AND/ OR ADDITIONAL REQUIREMENTS BY CITY.

2. ALL WORK SHALL COMPLY WITH THE STATE AND LOCAL ORDINANCES AND SHALL BE DONE TO THE HIGHEST STANDARDS OF CRAFTSMANSHIP.

4. NO DEVIATIONS FROM THESE DOCUMENTS SHALL BE MADE WITHOUT WRITTEN APPROVAL FROM DESIGNER. ANY CHANGES CAN AFFECT THE STRUCTURAL INTEGRITY AND CODE COMPLIANCE.

5. DIMENSIONS. DIMENSIONS THAT ARE NOT STATED AS "MAXIMUM" OR "MINIMUM" ARE ABSOLUTE. ALL DIMENSIONS ARE SUBJECT TO CONVENTIONAL TOLERANCES. VERIFY AND COORDINATE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO CONSTRUCTION. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED LENGTHS AND HEIGHTS IN ALL CASES. DO NOT SCALE DRAWINGS.

6. IN THE EVENT OF DISCREPANCIES OR CONTRADICTORY INFORMATION IN THE DRAWINGS, NOTES, OR SPECIFICATIONS, THE CONTRACTOR/OWNER TO NOTIFY THE DESIGNER TO OBTAIN CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

PROJECT CONTACTS:

**PROJECT OWNER / CONTRACTOR:**  
RODOLFO HERNANDEZ MCINTYRE  
206-291-8329  
SHANNON HERNANDEZ MCINTYRE  
206-240-9332  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

**DESIGNER:**  
BUILD STUFF LLC  
31212 1ST PL SW  
FEDERAL WAY, WA 98023  
CONTACT: DIEGO PINEDA  
(206) 771-5014

**SURVEYOR:**  
TERRANE LLC  
10801 MAIN ST #102,  
BELLEVUE, WA 98004  
CONTACT: DEREK GLADYSO  
(425) 765-6433

**GEOTECHNICAL ENGINEER:**  
COBALT GEOSCIENCES LLC  
P.O. BOX 1792  
NORTH BEND WA 98045  
CONTACT: PHIL HABERMAN  
(206) 331-1097

**ARBORIST**  
SCOTT SELBY CONSULTING LLC  
11129 31ST ST SE  
LAKE STEVENS, WA 98258  
CONTACT: SCOTT SELBY  
(206) 849-4718

**STRUCTURAL ENGINEER:**  
CSES ENGINEERING INC  
6311 17TH AVE NE  
SEATTLE WA 98115  
CONTACT: EVAN APOLIS  
(206) 369-3984

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BUILD STUFF

**BUILD STUFF LLC**  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |           |                      |            |  |
|----------------|-----------|----------------------|------------|--|
| Revision #     | Date      | Revision Description | Revision 1 |  |
| 1              | 5/22/2024 |                      |            |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #:

2402-026

Date:

09/19/24

COVER SHEET

A000

Scale:

## LEGAL DESCRIPTION

LOT 10, BLOCK 1, MERCER TERRACE, ACCORDING TO THE PLAT RECORDED IN VOLUME 72 OF PLATS, PAGE 86, IN KING COUNTY, WASHINGTON.

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

## BASIS OF BEARINGS

ACCEPTED THE BEARING OF N 32°22'39" W, BETWEEN MONUMENTS FOUND ALONG THE CENTERLINE OF MERCER TERRACE DR, PER REFERENCE NO. 1.

## REFERENCES

R1. MERCER TERRACE, VOL. 72 OF PLATS, PG. 86, RECORDS OF KING COUNTY, WASHINGTON.

## VERTICAL DATUM

NAVD 88 PER CITY OF MERCER ISLAND BENCHMARK NO. 2332  
DESCRIPTION: 3" COPPER PLUG IN CONC IN CASE  
LOCATION: MERCER TERRACE DR, OPP HSE #7449  
ELEVATION: 250.006'

## SURVEYOR'S NOTES

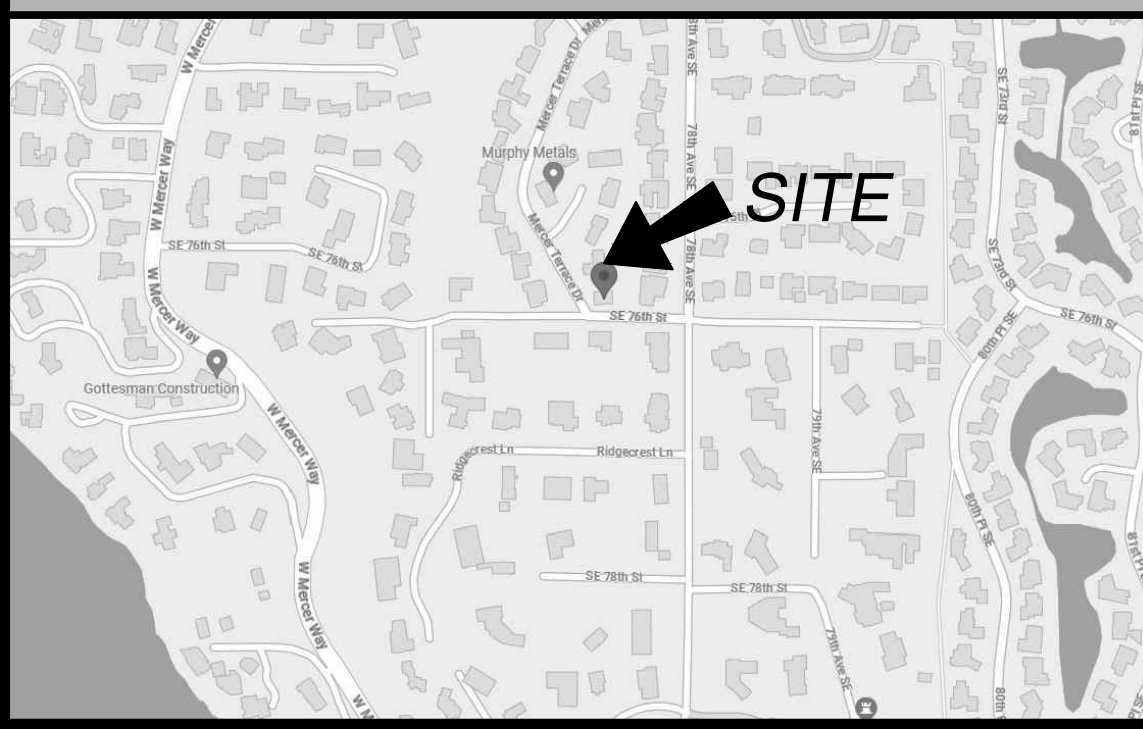
1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN AUGUST OF 2023. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. THE TYPES AND LOCATIONS OF ANY UTILITIES SHOWN ON THIS DRAWING ARE BASED ON INFORMATION PROVIDED TO US, BY OTHERS OR GENERAL INFORMATION READILY AVAILABLE IN THE PUBLIC DOMAIN INCLUDING, AS APPLICABLE, IDENTIFYING MARKINGS PLACED BY UTILITY LOCATE SERVICES AND OBSERVED BY TERRANE IN THE FIELD. AS SUCH, THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS ARE FOR INFORMATIONAL PURPOSES ONLY AND SHOULD NOT BE RELIED ON FOR DESIGN OR CONSTRUCTION PURPOSES; TERRANE IS NOT RESPONSIBLE OR LIABLE FOR THE ACCURACY OR COMPLETENESS OF THIS UTILITY INFORMATION. FOR THE ACCURATE LOCATION AND TYPE OF UTILITIES NECESSARY FOR DESIGN AND CONSTRUCTION, PLEASE CONTACT THE SITE OWNER AND THE LOCAL UTILITY LOCATE SERVICE (800-424-5555).
4. SUBJECT PROPERTY TAX PARCEL NO. 545360-0100
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 9,701 ±S.F. (0.22 ACRES)
6. ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM FIRST AMERICAN TITLE INSURANCE COMPANY'S "COMMITMENT", ORDER NO. 4209-4091530, DATED JULY 31, 2023. IN PREPARING THIS MAP, TERRANE, INC. HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS TERRANE, INC. AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY THE REFERENCED "COMMITMENT". TERRANE, INC. HAS RELIED WHOLLY ON FIRST AMERICAN TITLE INSURANCE COMPANY'S REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND TERRANE, INC. QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
7. EXISTING STRUCTURE(S) LOCATION AND DIMENSIONS ARE MEASURED FROM THE FACE OF THE SIDING UNLESS OTHERWISE NOTED.
8. FIELD DATA FOR THIS SURVEY WAS OBTAINED BY DIRECT FIELD MEASUREMENTS WITH A CALIBRATED ELECTRONIC 3-SECOND TOTAL STATION AND/OR SURVEY GRADE GPS OBSERVATIONS. ALL ANGULAR AND LINEAR RELATIONSHIPS ARE ACCURATE AND MEET THE STANDARDS SET BY WAC 332-130-090.

## LEGEND

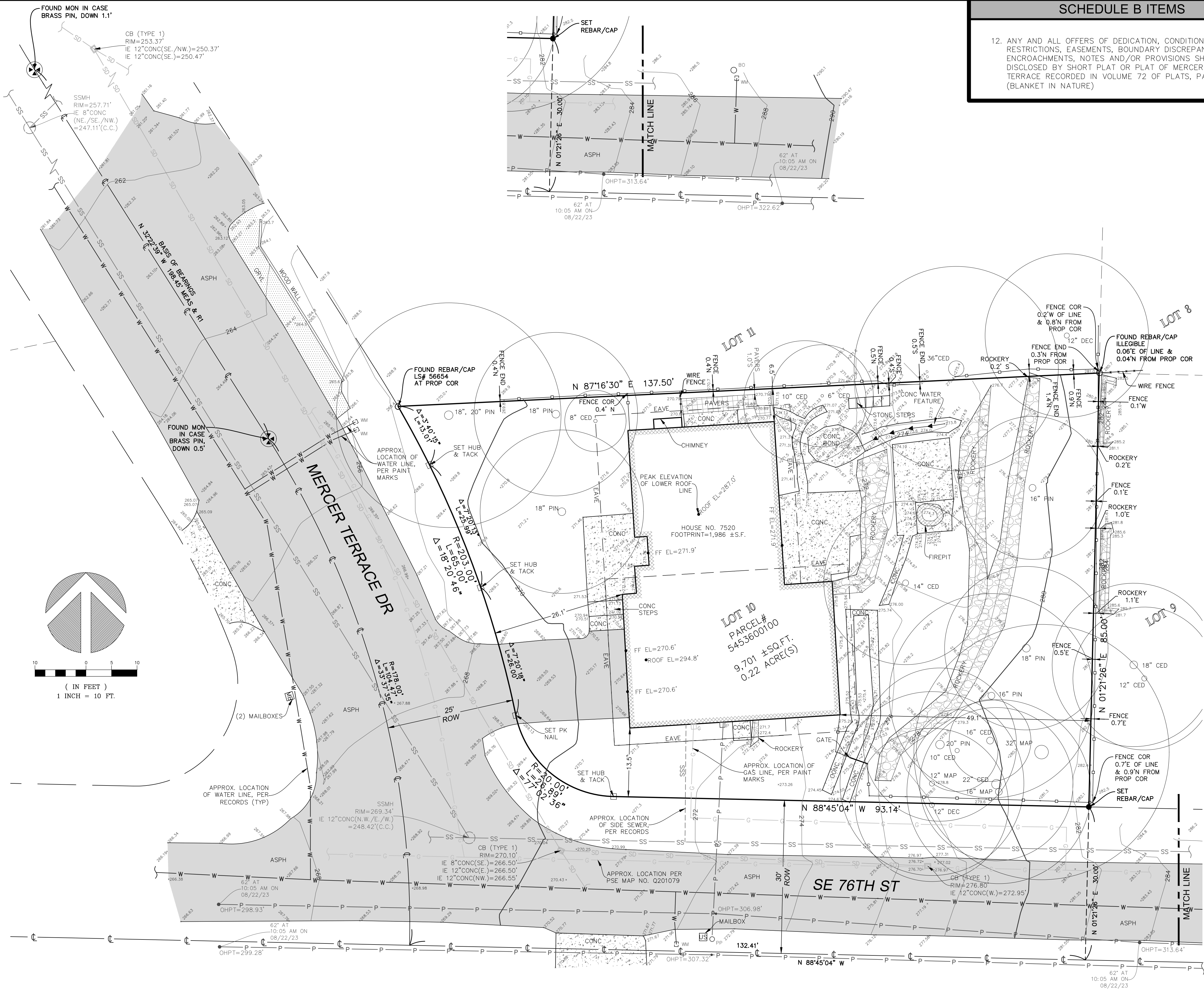
|  |                           |  |                             |
|--|---------------------------|--|-----------------------------|
|  | ASPHALT SURFACE           |  | OHPT TRANSMISSION ELEVATION |
|  | BLOW OFF                  |  | POWER METER                 |
|  | BUILDING                  |  | POWER POLE                  |
|  | CENTERLINE ROW            |  | POWER (OVERHEAD)            |
|  | CONCRETE SURFACE          |  | POWER POLE                  |
|  | DITCH (FLOWLINE)          |  | REBAR & CAP (SET)           |
|  | FENCE LINE (CHAIN LINK)   |  | REBAR AS NOTED (FOUND)      |
|  | FENCE LINE (WOOD)         |  | RETAINING WALL              |
|  | GAS LINE                  |  | ROCKERY                     |
|  | GAS METER                 |  | SEWER LINE                  |
|  | GRAVEL SURFACE            |  | SEWER MANHOLE               |
|  | INLET (TYPE 1)            |  | STORM DRAIN LINE            |
|  | LINESTAKES (AS NOTED)     |  | TREE (AS NOTED)             |
|  | MAILBOX (RESIDENTIAL)     |  | WATER LINE                  |
|  | MAILBOX (US POSTAL)       |  | WATER METER                 |
|  | MONUMENT (IN CASE, FOUND) |  |                             |

## VICINITY MAP

N.T.S.



## TOPOGRAPHIC &amp; BOUNDARY SURVEY



## SCHEDULE B ITEMS

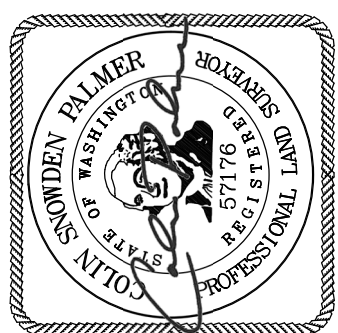
12. ANY AND ALL OFFERS OF DEDICATION, CONDITIONS, RESTRICTIONS, EASEMENTS, BOUNDARY DISCREPANCIES OR ENCROACHMENTS, NOTES AND/OR PROVISIONS SHOWN OR DISCLOSED BY SHORT PLAT OR PLAT OF MERCER TERRACE RECORDED IN VOLUME 72 OF PLATS, PAGE(S) 86. (BLANKET IN NATURE)

TOPOGRAPHIC & BOUNDARY SURVEY

PARCEL NO. 5453600100

HERNANDEZ RESIDENCE

7520 MERCER TERRACE DR  
MERCER ISLAND, WA 98040



TERRANE

10801 Main Street, Suite 102  
Bellevue, WA 98004  
p: 425-458-4488 | e: info@terrane.net

JOB NUMBER: 231287  
DATE: 09/01/23  
DRAFTED BY: IDV / RPM  
CHECKED BY: CSP / TLR  
SCALE: 1" = 10'

## REVISION HISTORY

| SHEET NUMBER |
|--------------|
| 1 OF 1       |

## INDEXING INFORMATION

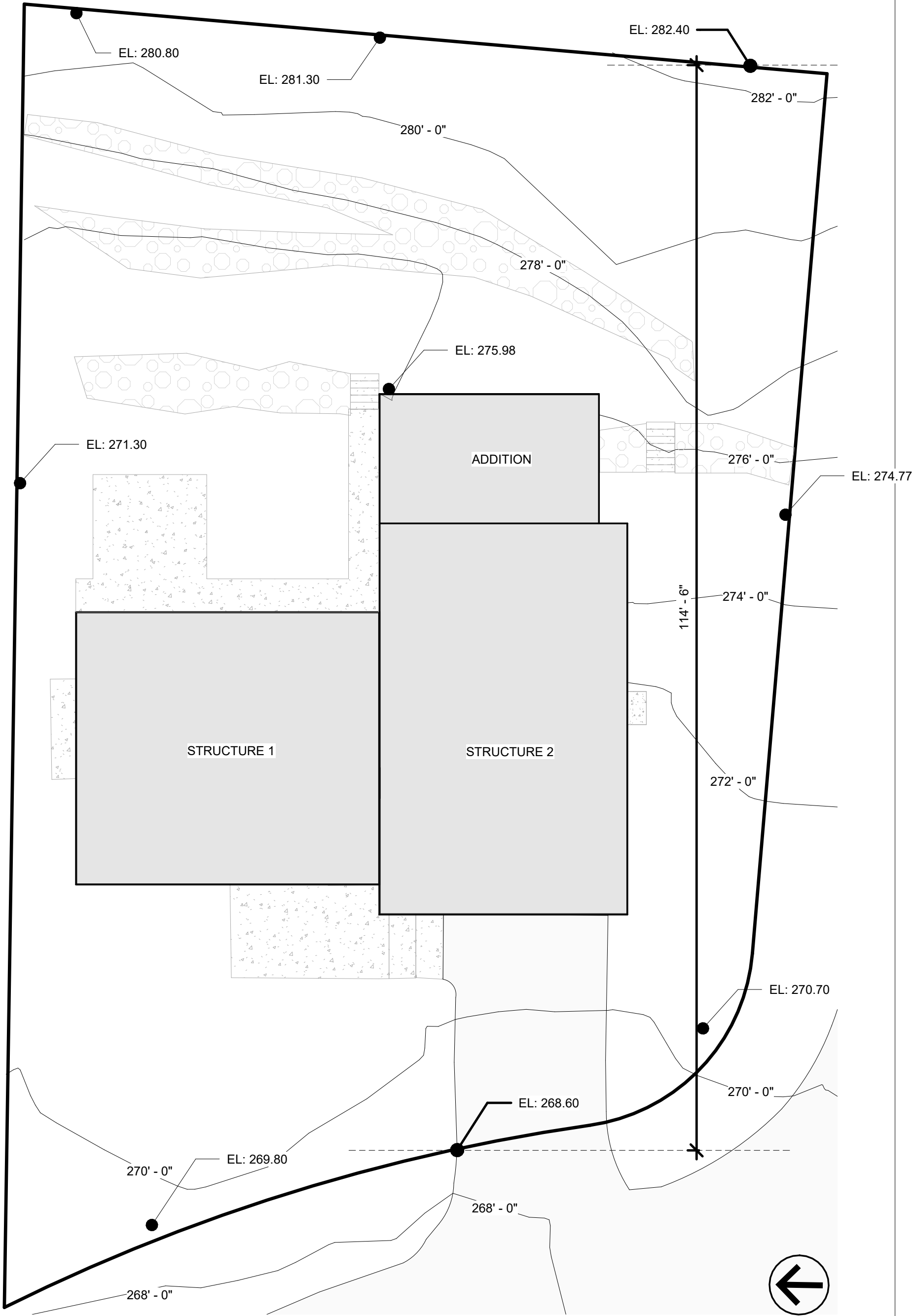
|                  |               |
|------------------|---------------|
| NW 1/4           | SE 1/4        |
| SECTION: 25      | TOWNSHIP: 24N |
| RANGE: 04E, W.M. | COUNTY: KING  |

## STEEP SLOPE/BUFFER DISCLAIMER:

THE LOCATION AND EXTENT OF STEEP SLOPES SHOWN ON THIS DRAWING ARE FOR INFORMATIONAL PURPOSES ONLY AND CANNOT BE RELIED ON FOR DESIGN AND/OR CONSTRUCTION. THE PITCH, LOCATION, AND EXTENT ARE BASED SOLELY ON OUR GENERAL OBSERVATIONS ON SITE AND OUR CURSORY REVIEW OF READILY AVAILABLE PUBLIC DOCUMENTS; AS SUCH, TERRANE CANNOT BE LIABLE OR RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY STEEP SLOPE INFORMATION. ULTIMATELY, THE LIMITS AND EXTENT OF ANY STEEP SLOPES ASSOCIATED WITH ANY SETBACKS OR OTHER DESIGN OR CONSTRUCTION PARAMETERS MUST BE DISCUSSED AND APPROVED BY THE REVIEWING AGENCY BEFORE ANY CONSTRUCTION CAN OCCUR.

|                                                                                  |                     |
|----------------------------------------------------------------------------------|---------------------|
|  | EXISTING FOOTPRINT  |
|  | ADDITION FOOTPRINT  |
|  | GRAVEL / DRAIN ROCK |
|  | CONCRETE HARDSCAPE  |
|  | PAVERS              |

Scale: As indicated



③ SITE SLOPE CALCULATION  
1" = 10'-0"

## SITE SLOPE CALCULATION

ELEVATION POINTS REFRENCED FROM SITE SURVEY ATTACHED TO THIS PLAN SET

HIGHEST ELEVATION POINT OF LOT: **282.40 FT**

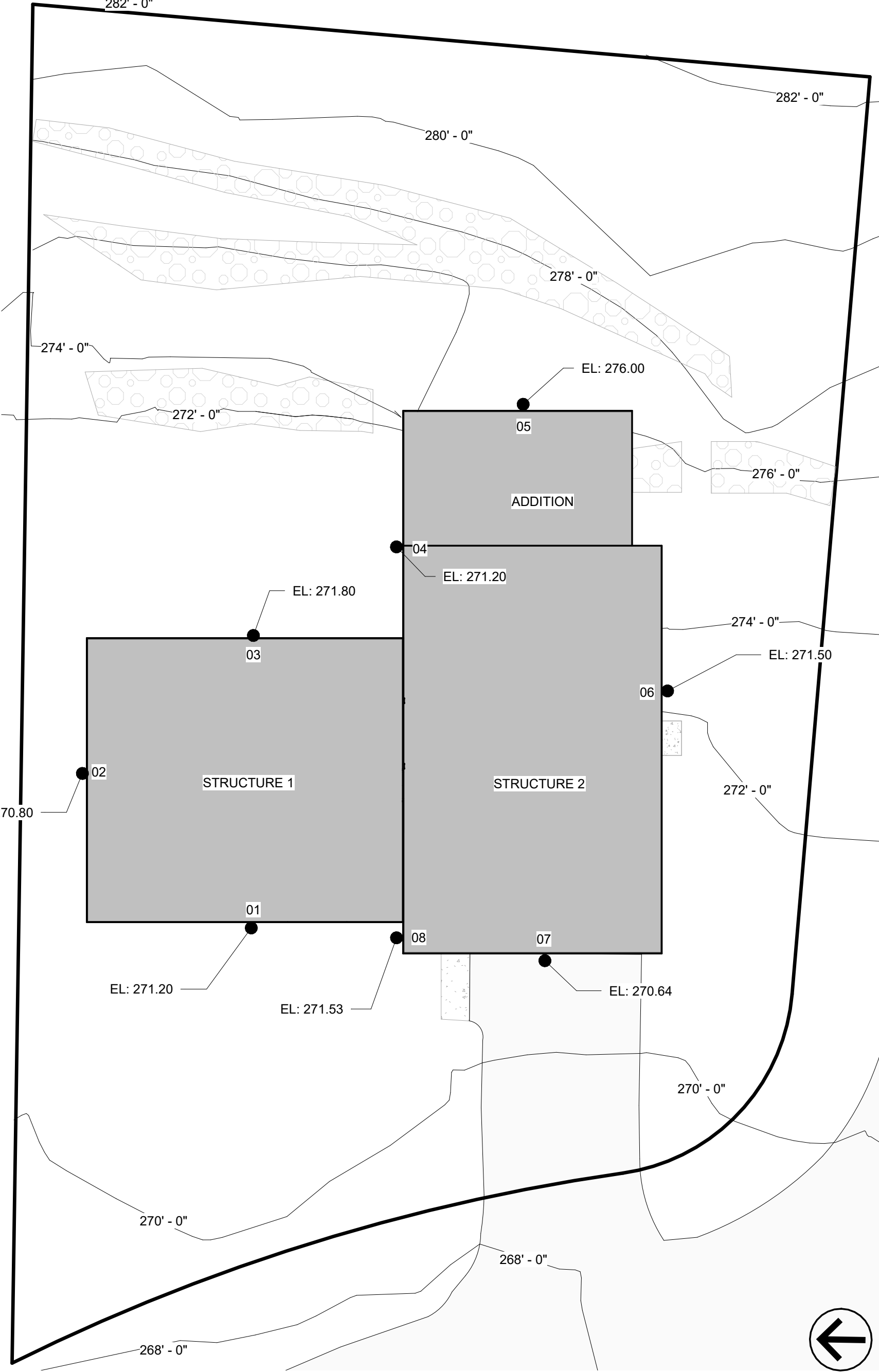
LOWEST ELEVATION POINT OF LOT: **268.60 FT**

ELEVATION DIFFERENCE: **13.80 FT**

HORIZONTAL DISTANCE BETWEEN HIGH AND LOW POINTS: **114.50 FT**

LOT SLOPE = ELEVATION DIFFERENCE / HORIZONTAL DISTANCE X 100

**LOT SLOPE = 12.05 %**  
(13.80 / 114.50) \* 100



② ABE CALCULATIONS  
1" = 10'-0"

## ABE CALCULATIONS

| WALL  | MIDPOINT ELEVATION | WALL LENGTH | ME x WL  |
|-------|--------------------|-------------|----------|
| 01    | 271.20             | 32.00       | 8678.40  |
| 02    | 270.80             | 28.75       | 7785.50  |
| 03    | 271.80             | 32.00       | 8697.60  |
| 04    | 271.20             | 21.42       | 5809.10  |
| 05    | 276.00             | 26.17       | 7222.92  |
| 06    | 271.50             | 53.33       | 14479.10 |
| 07    | 270.64             | 26.17       | 7082.65  |
| 08    | 271.53             | 3.17        | 860.75   |
| TOTAL | 2174.67            | 223.01      | 60616.02 |

TOTAL MIDPOINT ELEVATION \* WALL LENGTH: 60616.02  
TOTAL LENGTH OF WALLS: 223.01

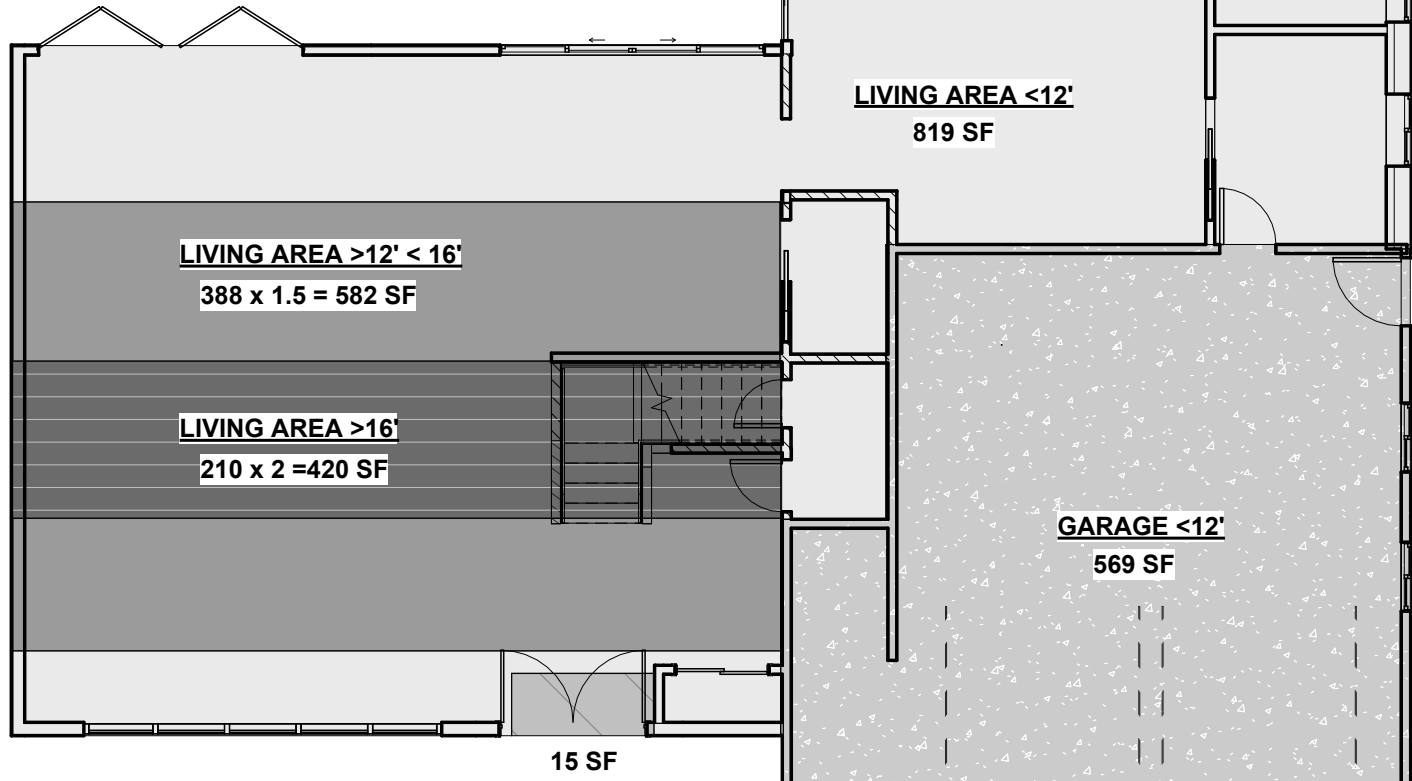
AVERAGE BUILDING ELEVATION (ABE) **271.81**

FT-IN 271' - 9 3/4"

## GROSS FLOOR AREA

|  |                                 |
|--|---------------------------------|
|  | EXISTING LIVING AREA < 12'      |
|  | EXISTING LIVING AREA >12' < 16' |
|  | EXISTING LIVING AREA >16'       |
|  | EXISTING GARAGE < 12'           |
|  | NEW LIVING AREA < 12'           |

④ LEVEL 2 - GFA  
1/8" = 1'-0"



① LEVEL 1 - GFA  
1/8" = 1'-0"

## ALLOWABLE GFA:

NET LOT AREA: 9,701 SF

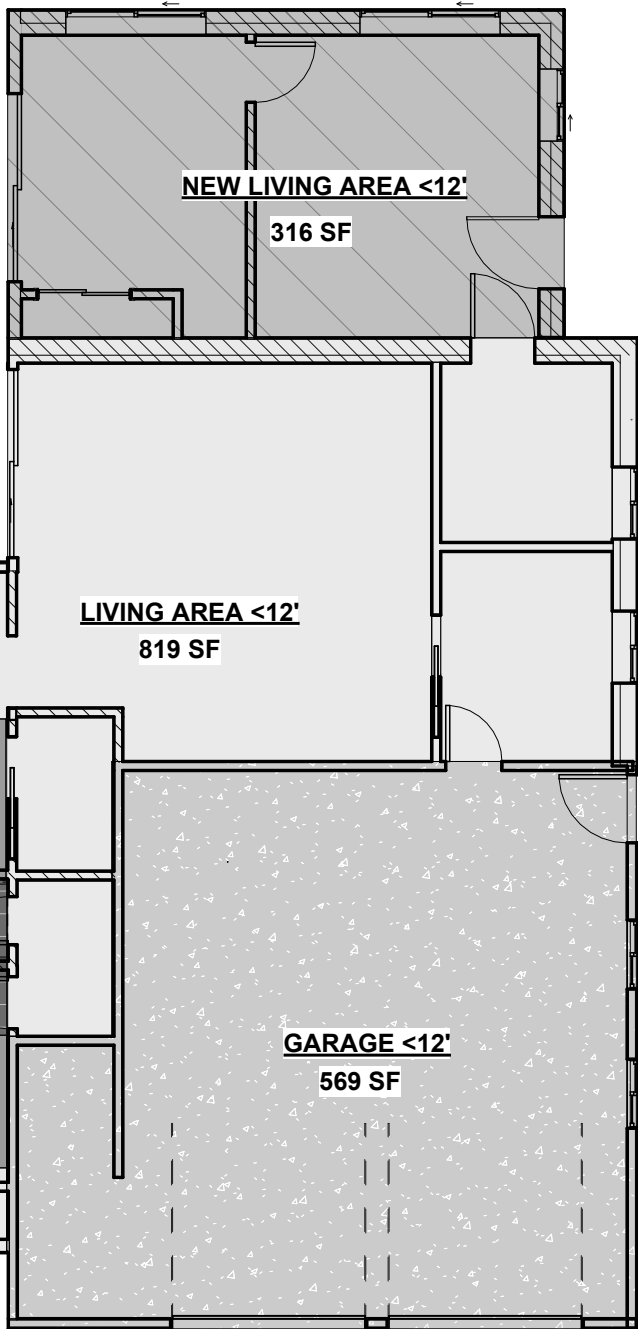
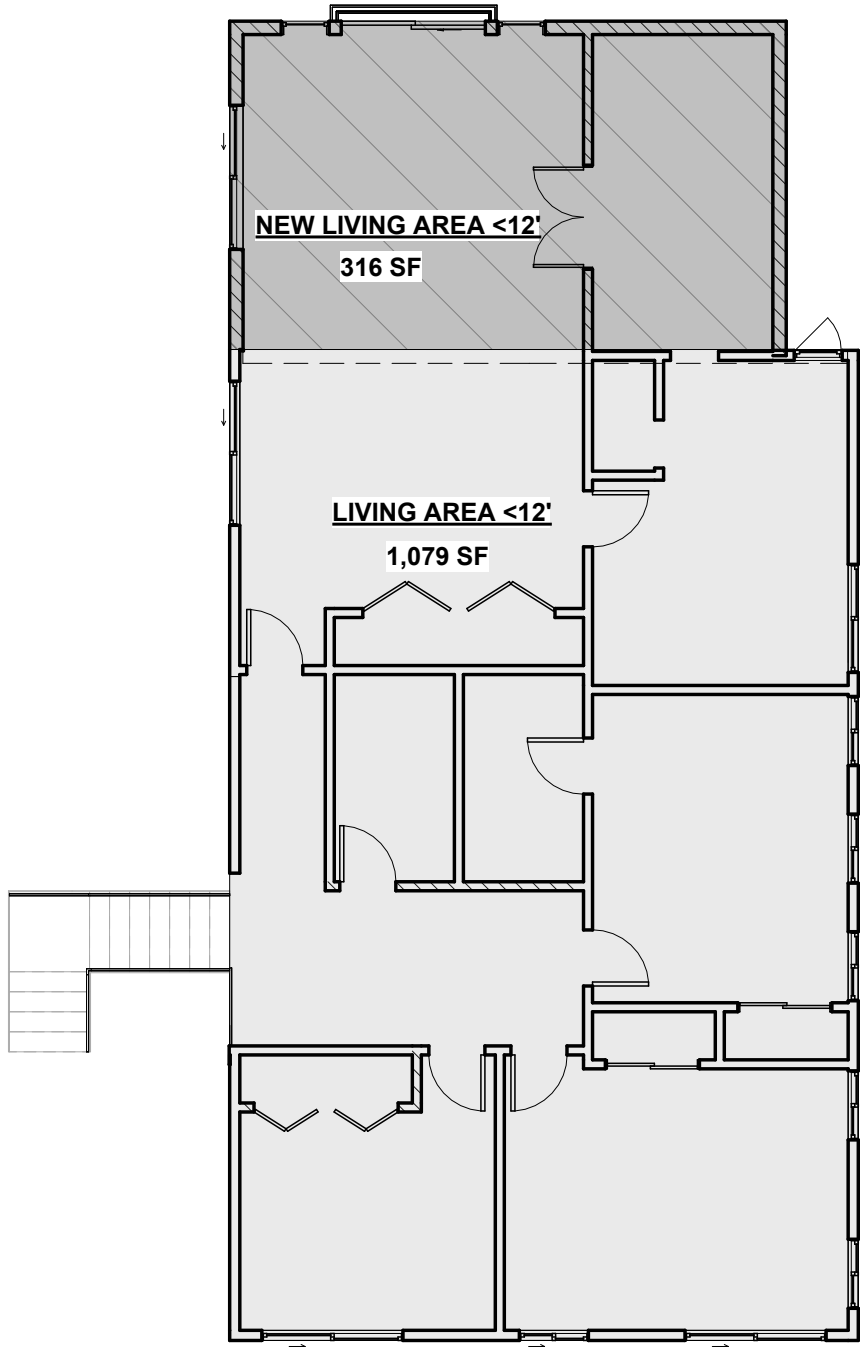
GROSS FLOOR AREA: (40% OF NET LOT AREA):  
ALLOWABLE GROSS FLOOR AREA: **3,880 SF**  
PER MICC 19.02.020.D.1

ALLOWABLE INCREASE OF GROSS FLOOR AREA W/ADU:  
PER MICC 19.02.020 D.3.b  
LESSER OF FIVE PERCENTAGE POINTS OR THE ACTUAL FLOOR AREA  
OF THE PROPOSED ACCESSORY DWELLING UNIT  
ALLOWABLE GROSS FLOOR AREA (45%): **4,365 SF**  
ALLOWABLE GROSS FLOOR AREA (40 % + ADU SF): **4,196 SF**

PROVIDED:  
II. THE LOT WILL CONTAIN AN ACCESSORY DWELLING UNIT  
ASSOCIATED WITH THE APPLICATION FOR A NEW OR REMODELED  
SINGLE-FAMILY HOME; AND  
III. THE TOTAL GROSS FLOOR AREA SHALL NOT EXCEED 4,500 SQUARE  
FEET OR 45 PERCENT OF THE LOT AREA, WHICHEVER IS LESS.

GFA CALCULATION HEIGHT MODIFIERS:

< 12' = 100% GFA MODIFIER  
>12' < 16 = 150% GFA MODIFIER  
> 16' = 200% GFA MODIFIER



## GFA CALCULATIONS:

|                                 |          |
|---------------------------------|----------|
| LEVEL 1:                        | 2,720 SF |
| EXISTING LIVING AREA <12'       | 819 SF   |
| EXISTING GARAGE <12'            | 569 SF   |
| EXISTING LIVING AREA >12' < 16' | 582 SF   |
| EXISTING LIVING AREA >16'       | 420 SF   |
| NEW LIVING AREA (ADU) < 12'     | 316 SF   |
| NEW LIVING AREA < 12'           | 15 SF    |

|                           |          |
|---------------------------|----------|
| LEVEL 2:                  | 1,395 SF |
| EXISTING LIVING AREA <12' | 1,079 SF |
| NEW LIVING AREA < 12'     | 316 SF   |

GRAND TOTAL **4,116 SF**

## BUILD STUFF

BUILD STUFF LLC  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |      |          |             |
|----------------|------|----------|-------------|
| Revision #     | Date | Revision | Description |
|                |      |          |             |
|                |      |          |             |
|                |      |          |             |
|                |      |          |             |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:  
PERMIT DRAWINGS SET

Project Owner:  
RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026  
Date: 09/19/24

SLOPE / ABE / GFA  
CALCULATIONS

A100.1

Scale: As indicated

| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |
|                |           |                      |  |
|                |           |                      |  |
|                |           |                      |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

LOT COVERAGE  
CALCULATIONS

A100.2

Scale: As indicated

LOT COVERAGE CALCULATIONS

ALLOWABLE LOT COVERAGE  
(FOR LOTS <15 % SLOPE - MAX 40% OF LOT AREA)  
GROSS LOT AREA: 9,701 SF  
NET LOT AREA (B): 9,701 SF  
ALLOWABLE LOT COVERAGE AREA: 3,880 SF

TOTAL EXISTING LOT COVERAGE AREA: (E5)  
(E) ROOF STRUCTURE 1: 1,223 SF  
(E) ROOF STRUCTURE 2: 1,560 SF

(E) TOTAL ROOF AREA: 2,783 SF  
(E) DRIVEWAY: 326 SF  
TOTAL: 3,109 SF

TOTAL LOT COVERAGE AREA REMOVED: (F)  
(E) ROOF STRUCTURE 1: 1,223 SF  
(E) ROOF STRUCTURE 2: 327 SF  
(E) ROOF STRUCTURE 2: 38 SF

TOTAL: 1,588 SF

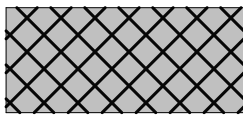
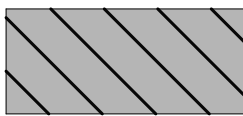
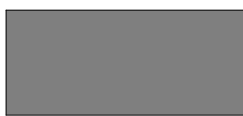
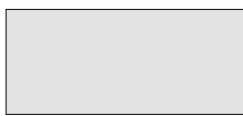
TOTAL NEW/REPLACED LOT COVERAGE: (I5)  
(R) ROOF STRUCTURE 1: 1,024 SF  
(R) ROOF STRUCTURE 2: 312 SF  
(N) ROOF STRUCTURE 2: 331 SF

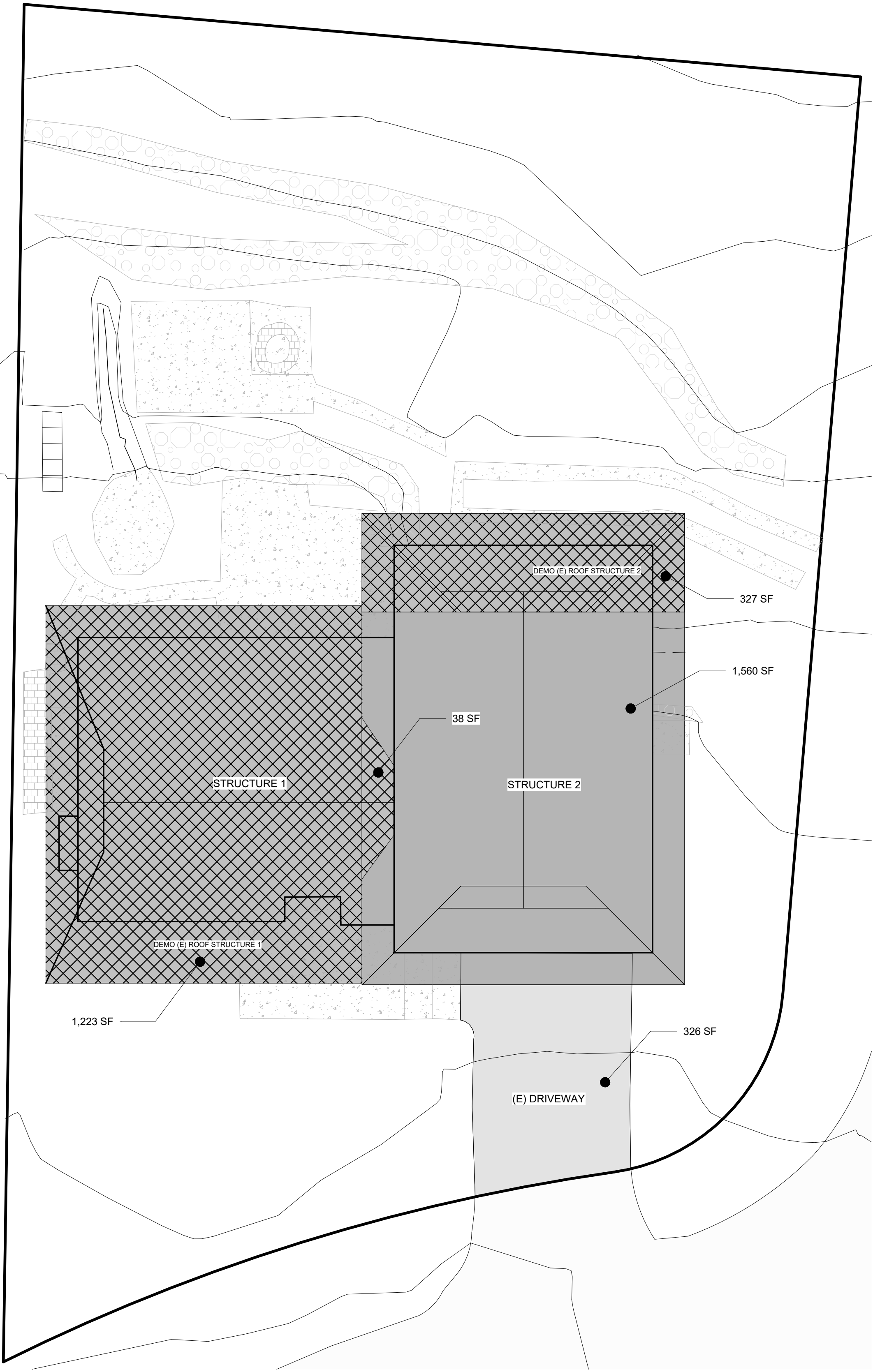
MAIN STRUCTURE ROOF AREA:  
TOTAL: 1,667 SF

TOTAL PROJECT LOT COVERAGE AREA: (E5 - F) + I5  
(3,109 - 1,588) + 1,667  
TOTAL: 3,188 SF

PROPOSED LOT COVERAGE % : (J/B) X100  
(3,188 / 9,701) X 100  
= 32.86 %

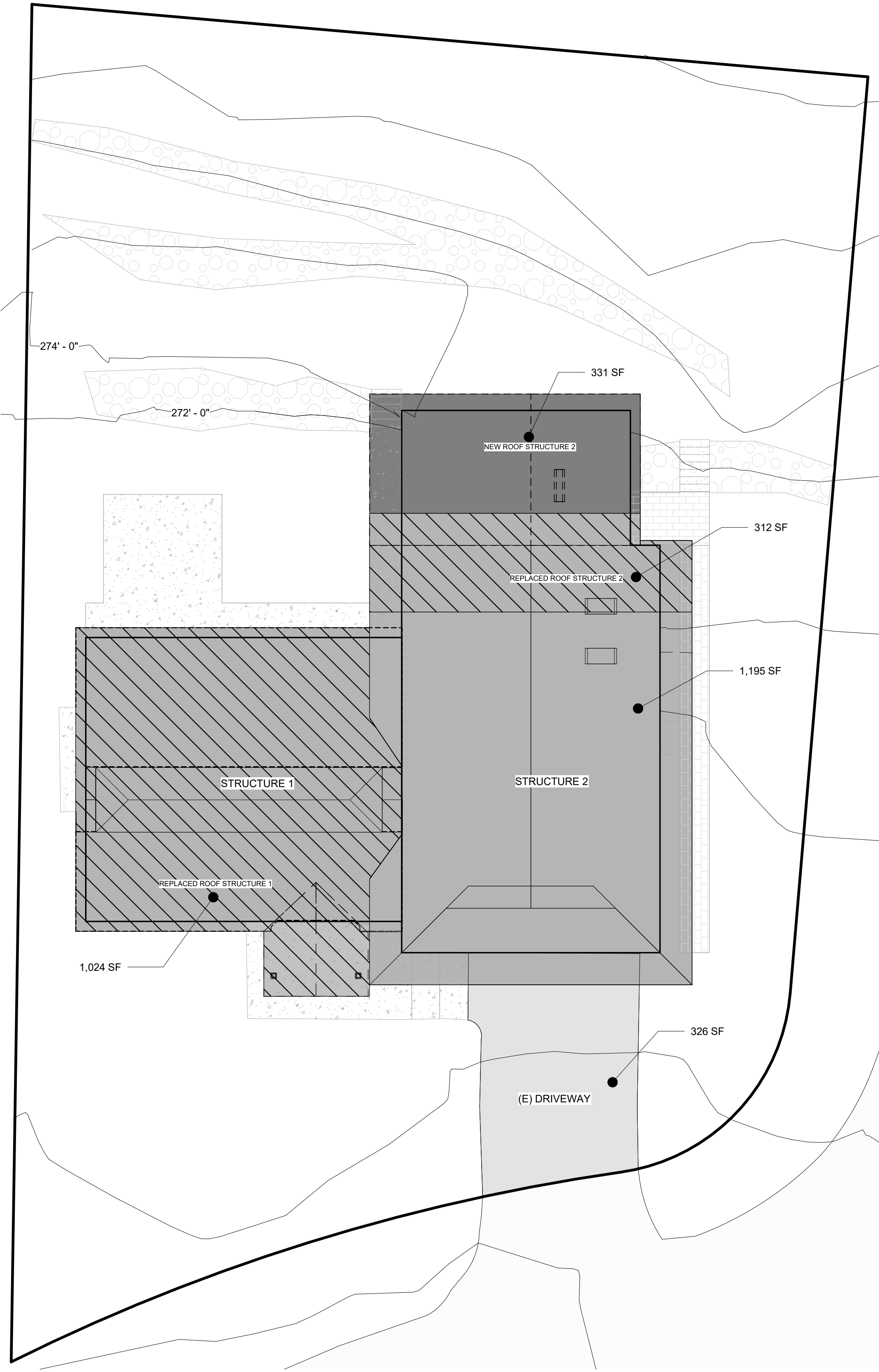
REMAINING ALLOWABLE LOT COVERAGE:  
ALLOWED LOT COVERAGE (-) PROPOSED LOT COVERAGE  
3,880 - 3,188 = 692 SF

| LOT COVERAGE                                                                          |                              |
|---------------------------------------------------------------------------------------|------------------------------|
|  | EXISTING ROOF AREA TO REMAIN |
|  | DEMO (E) LOT COVERAGE        |
|  | REPLACED EXISTING ROOF AREA  |
|  | NEW ROOF AREA                |
|  | VEHICULAR USE AREA TO REMAIN |



1 EXISTING - LOT COVERAGE  
1/8" = 1'-0"

(E) - EXISTING  
(R) - REPLACED  
(N) - NEW



2 PROPOSED - LOT COVERAGE  
1/8" = 1'-0"

HARDSCAPE CALCULATIONS

HARDSCAPE CALCULATIONS (MAX 9% OF LOT AREA)  
NET LOT AREA : 9,701 SF  
ALLOWABLE HARDSCAPE 9%: 873 SF  
AREA BORROWED FROM LOT COVERAGE: 692 SF  
TOTAL ALLOWED LOT COVERAGE SF: 1,565 SF  
TOTAL ALLOWED LOT COVERAGE %: 16.1 %

EXISTING HARDSCAPE AREA: W/ EXISTING ROOFLINE  
(E) CONC PATIO 1: 58 SF  
(E) CONC PATIO 2: 199 SF  
(E) CONC PATIO 3: 225 SF  
(E) CONC WALKWAY 1: 97 SF  
(E) CONC WALKWAY 2: 23 SF  
(E) PAVER WALKWAY: 33 SF  
(E) CONC SLAB: 10  
(E) CONC STEP: 10 SF  
(E) STONE STEPS: 16 SF  
(E) ROCKERY 1: 130 SF  
(E) ROCKERY 2: 528 SF  
(E) CONC POND: 66 SF

TOTAL EXISTING HARDSCAPE AREA: (F7)  
UNCOVERED PATIOS: 482 SF  
WALKWAYS: 153 SF  
STAIRS / STEPS: 36 SF  
ROCKERIES & RETAINING WALLS: 658 SF  
OTHER - (CONC POND): 66 SF  
TOTAL: 1,395 SF

REMOVED HARDSCAPE:  
(E) CONC PATIO 3: 225 SF  
(E) CONC PATIO 2: 199 SF  
(E) CONC WALKWAY 1: 97 SF  
(E) CONC WALKWAY 2: 23 SF  
(E) PAVER WALKWAY: 33 SF  
(E) STONE STEPS: 16 SF  
(E) ROCKERY 1: 130 SF  
(E) ROCKERY 2: 100 SF  
(E) CONC POND: 66 SF

TOTAL HARDSCAPE AREA REMOVED: (G)  
UNCOVERED PATIOS: 424 SF  
WALKWAYS: 153 SF  
STAIRS / STEPS: 16 SF  
ROCKERIES & RETAINING WALLS: 230 SF  
OTHER - (CONC POND): 66 SF

TOTAL: 889 SF

NEW/REPLACED HARDSCAPE: W/ UPDATED ROOFLINE  
(R) CONC PATIO 2: 201 SF  
(N) CONC PATIO: 35 SF  
(N) PAVER WALKWAY: 70 SF  
(N) STONE STEPS: 16 SF  
(R) ROCKERY 1: 145 SF  
(R) ROCKERY 2: 46 SF  
(N) ROCKERY: 79 SF  
(N) RETAINING WALL: 18 SF  
(EU) ( UNCOVERED CONC SLAB): 17 SF

TOTAL NEW/REPLACED HARDSCAPE: (H7)  
UNCOVERED PATIOS: 236 SF  
WALKWAYS: 70 SF  
STAIRS / STEPS: 16 SF  
ROCKERIES & RETAINING WALLS: 288 SF  
OTHER - (UNCOVERED CONC SLAB): 17 SF

TOTAL: 627 SF

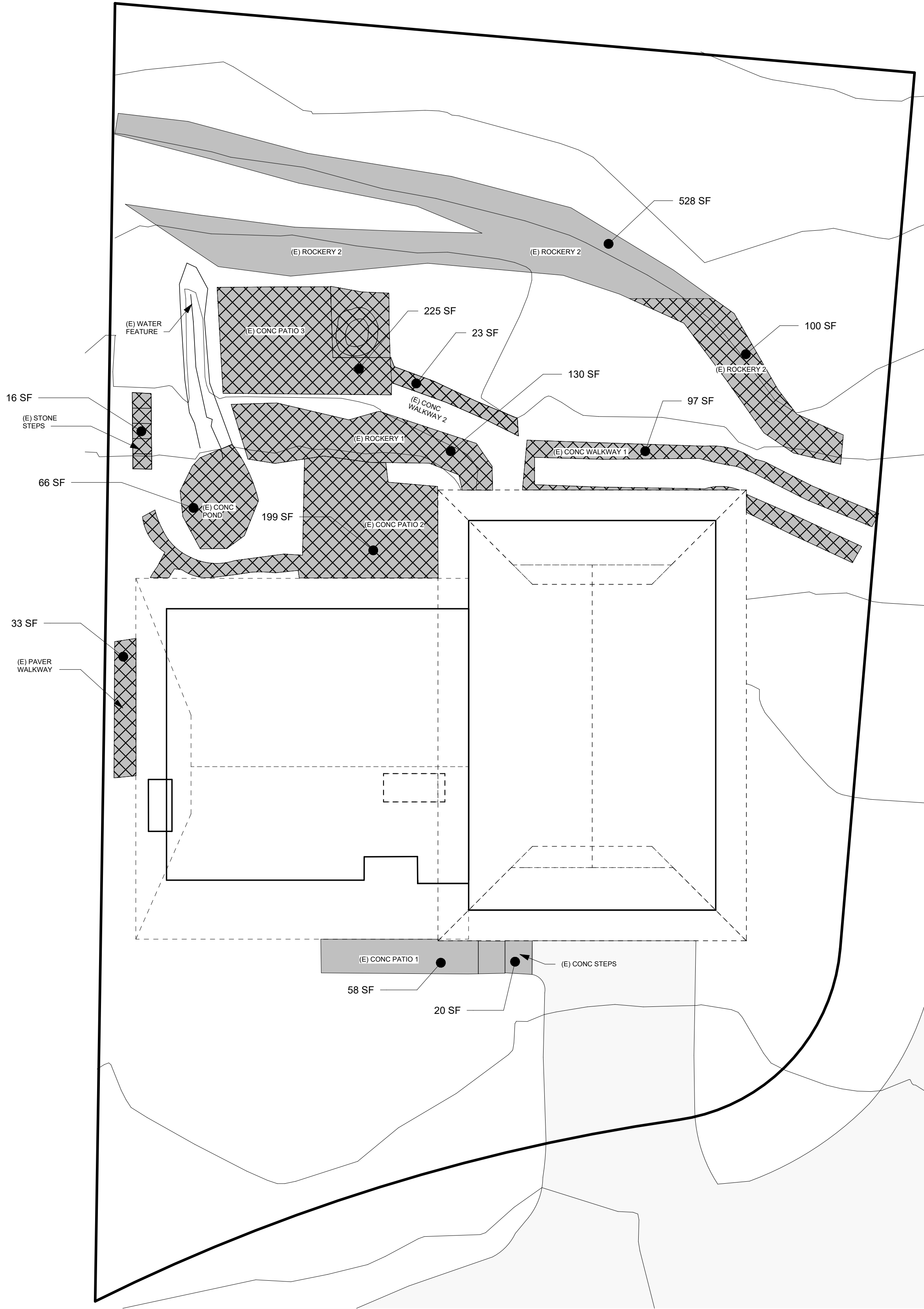
TOTAL PROJECT HARDSCAPE AREA: (F7 - G) + H7  
(1,395 - 889) + 627  
TOTAL: 1,133 SF

PROPOSED HARDSCAPE % : (J/B) X100  
(1,133 / 9,701) X 100  
= 11.67 %

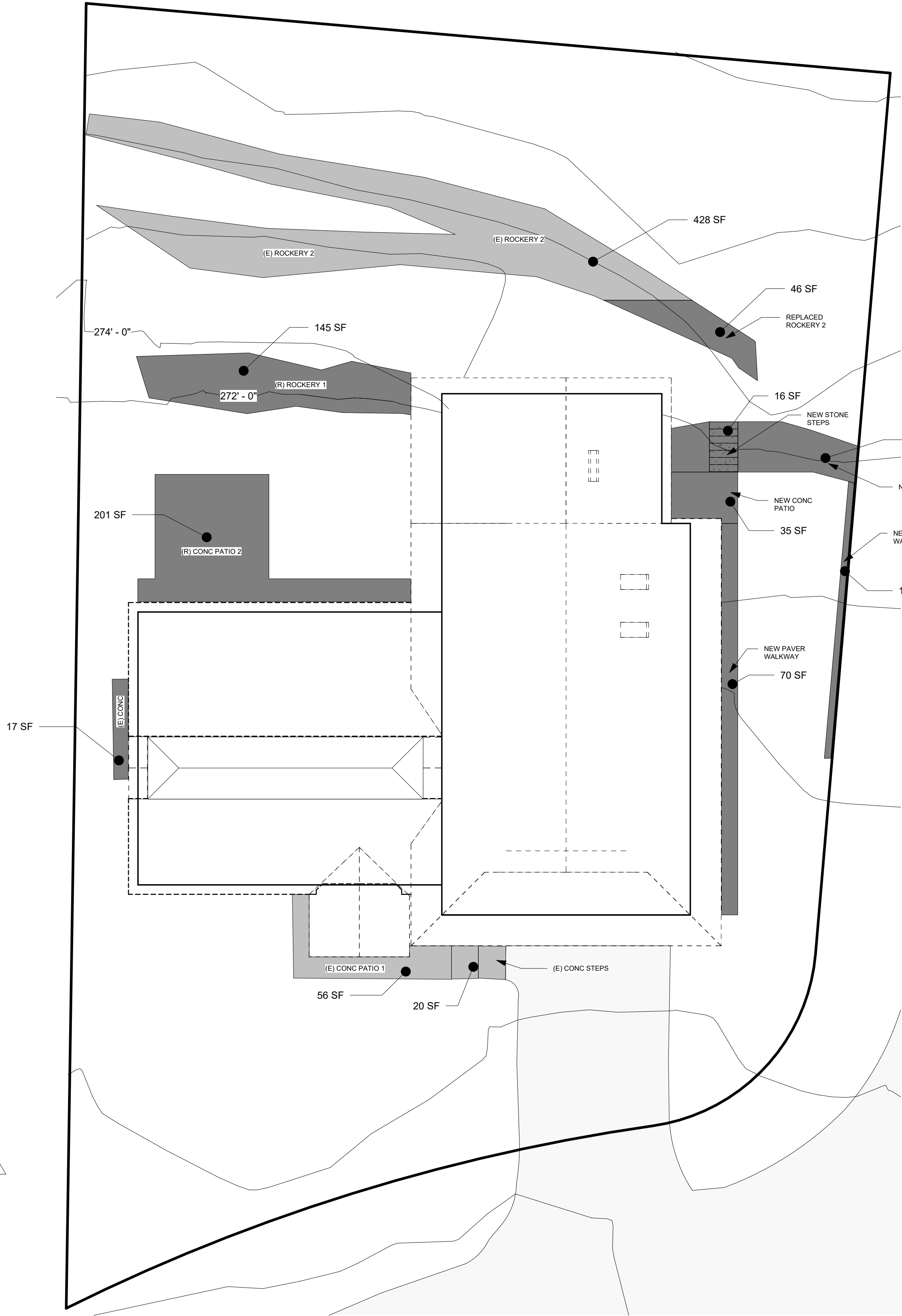
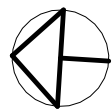
HARDSCAPE

|                                                                                       |                                                                     |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------|
|  | EXISTING HARDSCAPE TO REMAIN                                        |
|  | DEMO (E) HARDSCAPE                                                  |
|  | NEW/REPLACED HARDSCAPE UNCOVERED HARDSCAPE UNDER NEW ROOF OVERHANGS |

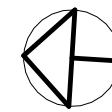
(E) - EXISTING  
(R) - REPLACED  
(N) - NEW  
(EU) - EXISTING UNCOVERED



1 EXISTING - HARDSCAPE  
1/8" = 1'-0"



2 PROPOSED - HARDSCAPE  
1/8" = 1'-0"



BUILD STUFF

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| REVISION TABLE |           |                      |  |
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| 2              | 9/19/2024 | Revision 2           |  |
|                |           |                      |  |
|                |           |                      |  |
|                |           |                      |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #:

2402-026

Date:

09/19/24

HARDSCAPE  
CALCULATIONS

A100.3

Scale: As indicated

**BUILD STUFF LLC**  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |           |                      |
|----------------|-----------|----------------------|
| Revision #     | Date      | Revision Description |
| 2              | 9/19/2024 | Revision 2           |
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**HERNANDEZ RESIDENCE**  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

# STORMWATER CALCULATIONS

## A100.4

Scale: As indicated

**NET INCREASE IMPERVIOUS SURFACE: (<500 SF)**

**ROOF & DRIVEWAY: 3,109 SF**  
(E) ROOF STRUCTURE 1: 1,223 SF  
(E) ROOF STRUCTURE 2: 1,560 SF  
(E) DRIVEWAY: 326 SF

**OTHER SURFACES: 1,395 SF**  
UNCOVERED PATIOS: 482 SF  
WALKWAYS: 153 SF  
STAIRS / STEPS: 36 SF  
ROCKERIES & RETAINING WALLS: 658 SF  
OTHER - (CONC POND): 66 SF

TOTAL: 4,504 SF

**ROOF & DRIVEWAY: 1,588 SF**  
 (E) ROOF STRUCTURE 1: 1,223 SF  
 (E) ROOF STRUCTURE 2: 327 SF  
 (E) ROOF STRUCTURE 2: 38 SF

**OTHER SURFACES: 889 SF**  
UNCOVERED PATIOS: 424 SF  
WALKWAYS: 153 SF  
STAIRS / STEPS: 16 SF  
ROCKERIES & RETAINING WALLS: 230 SF  
OTHER - (CONC POND): 66 SF

TOTAL: 2,477 SF

**ROOF & DRIVEWAY: 1,667 SF**  
(R) ROOF STRUCTURE 1: 1,024 SF  
(R) ROOF STRUCTURE 2: 312 SF  
(N) ROOF STRUCTURE 2: 331 SF

**OTHER SURFACES: 627 SF**  
UNCOVERED PATIOS: 236 SF  
WALKWAYS: 70 SF  
STAIRS / STEPS: 16 SF  
ROCKERIES & RETAINING WALLS: 288 SF  
OTHER - (UNCOVERED CONC SLAB): 17 SF

TOTAL: 2,294 SF

**CALCULATION: (A - B) + C**  
(4,504 - 2,477) + 2,294

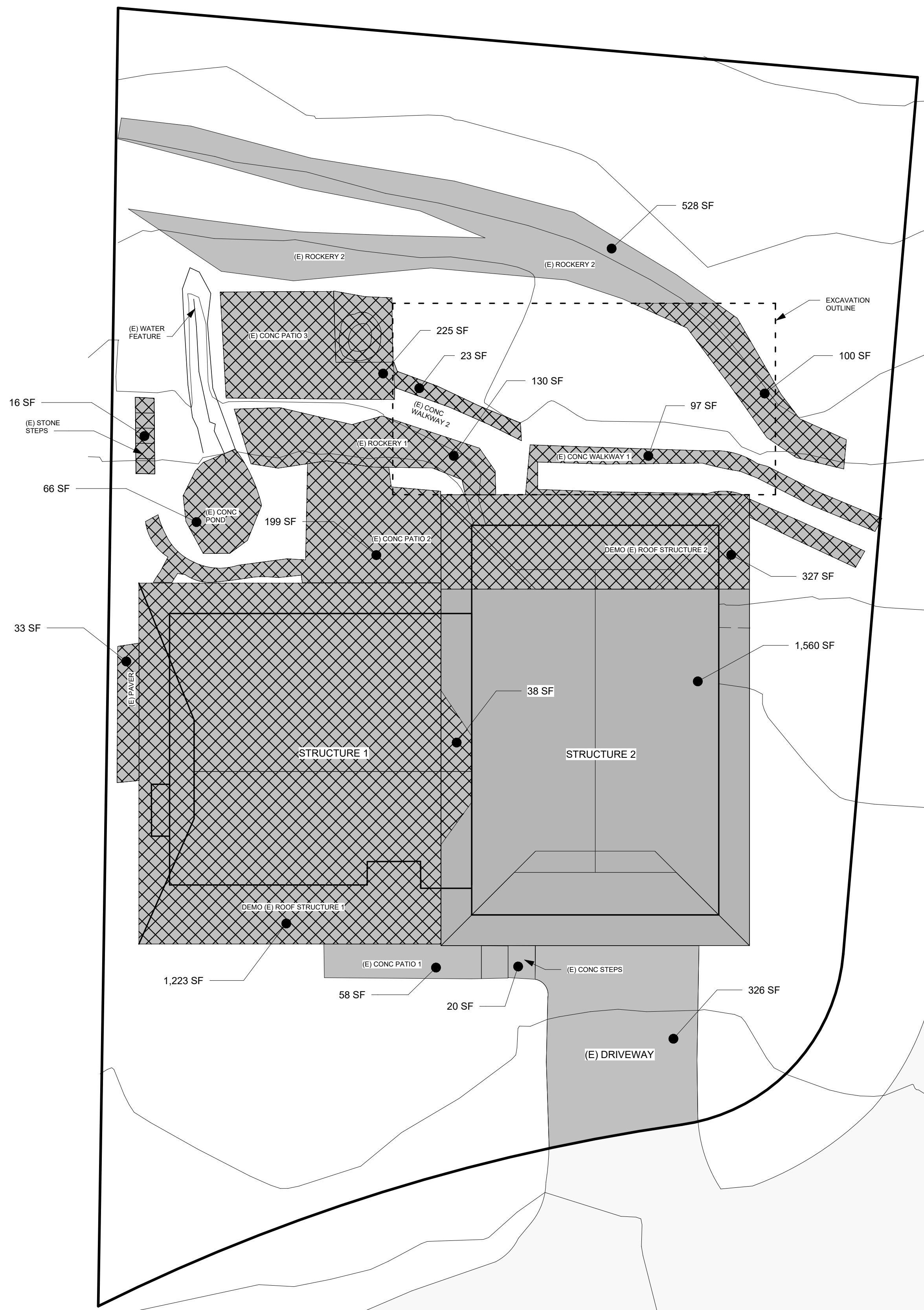
TOTAL: 4,321 SF

= PROPOSED (-) EXISTING:  
4,321 - 4,504 = **-183 SF**

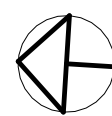
**NEW ROOF STRUCTURE 2: 331 SF**  
**REPLACED ROOF STRUCTURE 1: 1,024 SF**

**OTHER HARD SURFACES: 627 SF**  
UNCOVERED PATIOS: 236 SF  
WALKWAYS: 70 SF  
STAIRS / STEPS: 16 SF  
ROCKERIES & RETAINING WALLS: 288 SF  
OTHER - (UNCOVERED CONC SLAB): 17 SF

TOTAL: 1,982 SF

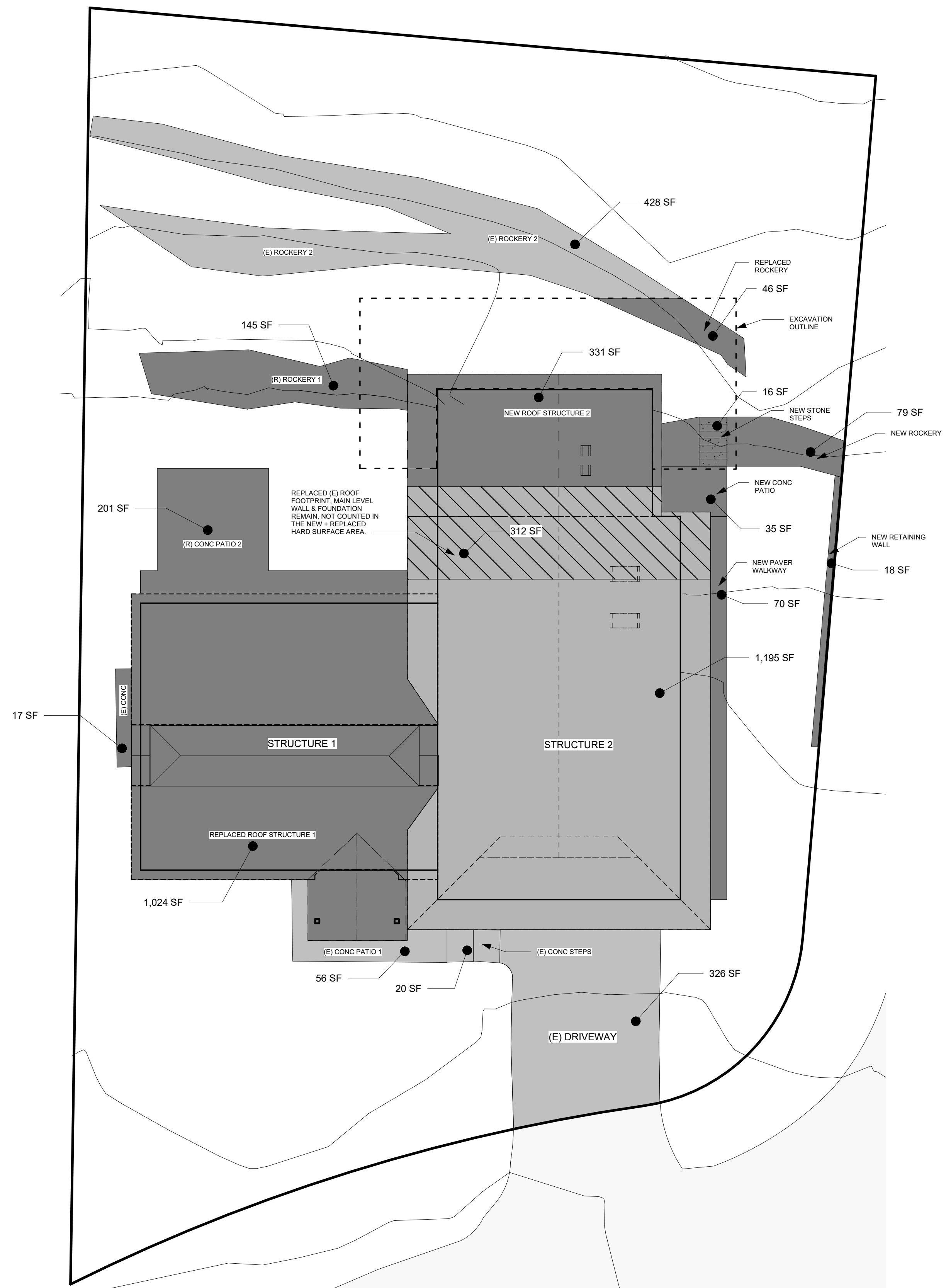


2 EXISTING - IMPERVIOUS SURFACE  
1/8" = 1'-0"

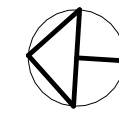


(E) - EXISTING  
(R) - REPLACED  
(N) - NEW

|                                                                                       |                                     |
|---------------------------------------------------------------------------------------|-------------------------------------|
|  | EXISTING HARD SURFACES<br>TO REMAIN |
|  | DEMO EXISTING HARD<br>SURFACES      |
|  | NEW/REPLACED HARD<br>SURFACES       |



① PROPOSED - IMPERVIOUS SURFACE  
1/8" = 1'-0"



| REVISION TABLE |           |                      |  |
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|                |           |                      |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

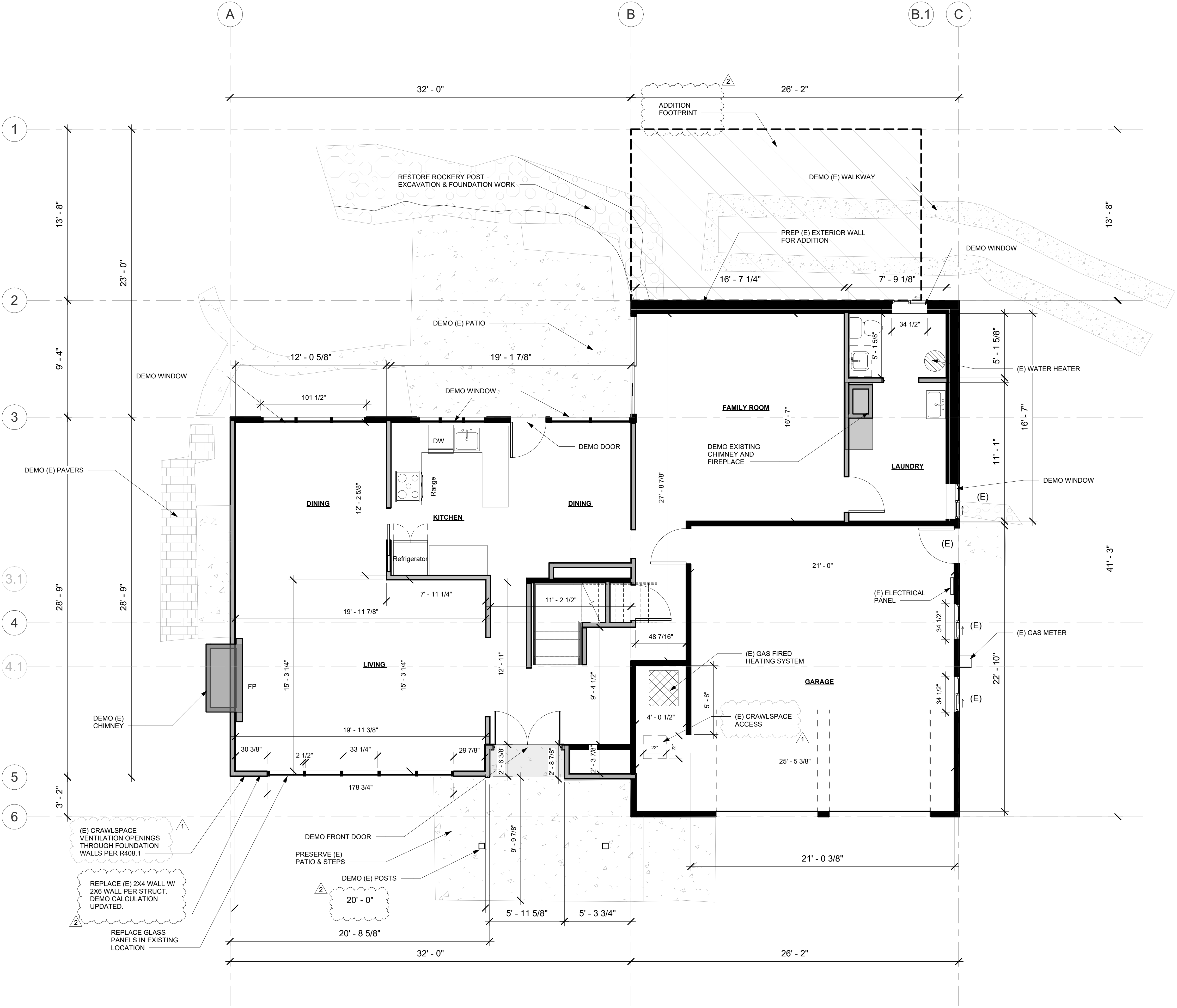
Record #: 2402-026

Date: 09/19/24

DEMO LEVEL 1

A101

Scale: 1/4" = 1'-0"



DEMO PLAN NOTES:

- CONTRACTOR TO VERIFY MEASUREMENTS OF EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES.
- DEMO ALL EXISTING BRICK FIREPLACES.
- DEMOLITION: ITEMS INDICATED ON PLANS TO BE DEMOLISHED, SHALL BE COMPLETELY REMOVED AND DISPOSED UNLESS NOTED OTHERWISE. CONTRACTOR/OWNER RESPONSIBLE FOR REVIEW OF THE HAZARDOUS MATERIALS ABATEMENT, REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS IF APPLICABLE FOR CUTTING AND PATCHING WORK.

EXISTING CONDITION NOTES:

- (E) EXTERIOR WALLS: 2X4 STUD @16" O.C.  
8" CONCRETE FOUNDATION WALLS WITH FOOTINGS.
- (E) FLOOR STRUCTURE: WOOD FRAMED CRAWLSPACE FLOOR AT MAIN LEVEL, SLAB ON GRADE AT GARAGE, AND WOOD FRAMED FLOOR AT SECOND LEVEL.
- (E) ROOF STRUCTURE: SITE-CUT ROOF TRUSSES.
- (E) HEATING: CENTRAL FORCED AIR HEATING - NATURAL GAS - PUBLIC SUPPLY, GAS METER.
- (E) HOT WATER UNIT: GAS FUELED.
- (E) ATTIC: VENTED THROUGH SOFFIT AND ROOF VENTS.

STRUCTURAL ALTERATION CALCULATION:

PER MICC 19.01.050 (D)(1)(b)(iii)  
REFERENCE DEMO PLANS ON SHEET A101 & A103 FOR DIMENSIONS OF STRUCTURALLY ALTERED WALLS

PERCENTAGE OF EXTERIOR WALLS ALTERED =  
(SUM OF THE LENGTH OF EXISTING EXTERIOR WALLS TO BE STRUCTURALLY ALTERED) ÷ (SUM OF THE LENGTH OF EXISTING EXTERIOR WALLS)

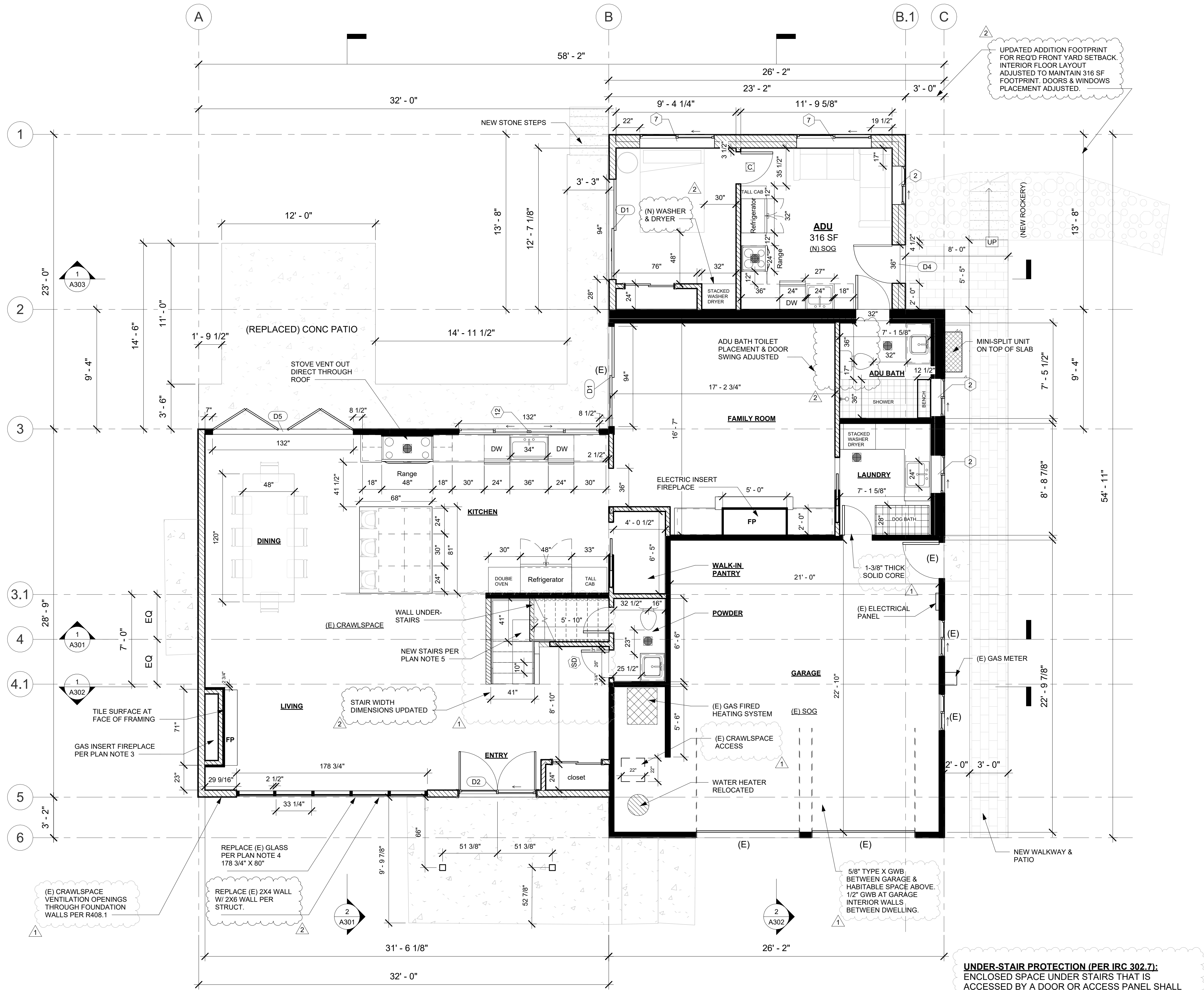
$(65.4 \text{ FEET}) \div (204.21 \text{ FEET}) = 32\%$

(A) THE "SUM OF THE LENGTH OF EXISTING EXTERIOR WALLS TO BE STRUCTURALLY ALTERED" IS THE SUM OF EACH WALL SEGMENT THAT IS COMPLETELY DEMOLISHED.

(B) THE "SUM OF THE LENGTH OF EXTERIOR WALLS" IS THE SUM OF THE LENGTHS OF EACH EXTERIOR WALL SEGMENT OF A STRUCTURE OR BUILDING.

FLOOR PLAN LEGEND

| SYMBOL | DESCRIPTION   | NOTES                                                                                           |
|--------|---------------|-------------------------------------------------------------------------------------------------|
|        | EXISTING WALL | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)<br>8" CONCRETE WALL (EXT.) |
|        | NEW WALL      | 2X6 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |
|        | DEMO WALL     | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |



- PLAN NOTES:**
- CONTRACTOR TO VERIFY MEASUREMENTS OF EXISTING CONDITIONS PRIOR TO CONSTRUCTION. DIMENSIONS SUBJECT TO CONVENTIONAL TOLERANCES.
  - REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES INCLUDING UNIT SIZE.
  - GAS INSERT FIREPLACE, VERIFY REQUIRED FRAMING WIDTH, HEIGHT, AND DEPTH PER MANUFACTURER SPECIFICATIONS.
  - REPLACE (E) GLASS PANELS IN NEW 2X6 WALL - CONTRACTOR TO VERIFY THE (E) GLASS FRAME AND PANEL DIMENSIONS FOR REPLACEMENT.
  - STAIR DIMENSIONS PER IRC R311.7, MAIN INTERIOR STAIR SHALL BE REBUILT AND NEW GUARDS WILL BE INSTALLED TO COMPLY WITH IRC R312.
  - AIR EXHAUST OPENINGS SHALL TERMINATE NOT LESS THAN 3 FEET FROM OPERABLE AND NONOPERABLE OPENINGS INTO THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES EXCEPT WHERE THE OPENING IS LOCATED 3 FEET ABOVE THE AIR INTAKE.
  - PROVIDE FIREBLOCKING FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING.
  - SAFETY GLAZING REQUIRED AT WET SURFACES (PER IRC R308.4.5 ) GLAZING IN WALLS, ENCLOSURES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND SIMILAR, WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE CONSIDERED A HAZARDOUS LOCATION. APPLIES TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING.

**ENERGY & FUEL NORMALIZATION CREDITS:**  
2018 WASHINGTON STATE ENERGY CODE - RESIDENTIAL

**CREDITS REQUIRED**  
SMALL DWELLING UNIT: 3.0 CREDITS REQUIRED

**PROPOSED:**  
**HEATING OPTIONS:**  
DHP WITH ZONAL ELECTRIC RESISTANCE (4) PER OPT. (3.4) : 0.5 CREDITS  
**ENERGY OPTIONS:**  
EFFICIENT BUILDING ENVELOPE OPTION (1.3) : 0.5 CREDITS  
HIGH EFFICIENCY HVAC OPTION (3.4) : 1.5 CREDITS  
APPLIANCE PACKAGE (7.1) : 0.5 CREDITS

**CREDIT OPTION (1.3): EFFICIENT BUILDING ENVELOPE**  
PRESCRIPTIVE COMPLIANCE IS BASED ON TABLE R402.1.1 WITH THE FOLLOWING MODIFICATIONS:

VERTICAL FENESTRATION = U-FACTOR: (.28)  
FLOORS - R-38  
SLAB ON GRADE R-10 PERIMETER AND UNDER ENTIRE SLAB  
BELOW GRADE SLAB R-10 PERIMETER AND UNDER ENTIRE SLAB  
OR COMPLIANCE BASED ON SECTION R402.1.4: REDUCE THE TOAL CONDUCTIVE UA BY 5%

**CREDIT OPTION (3.4): DUCTLESS MINI SPLIT SYSTEM SPECS**

**DUCTLESS MINI HEAT SPLIT SYSTEM**  
HEATING SEASONAL PERFORMANCE FACTOR: 11.5 HSPF  
MODEL: BLUERIDGE BMM5519-9C-9C-12C-18C  
HEATING CAPACITY: 55,000 BTU (4.5 TON)  
ENERGY EFFICIENCY RATIO: 10.5 EER  
SEER: 19.0 SEER  
ZONES: 5

**CREDIT OPTION (7.1): APPLIANCE PACKAGE**  
ALL OF THE FOLLOWING APPLIANCES SHALL BE NEW AND INSTALLED IN THE DWELLING UNIT AND SHALL MEET THE FOLLOWING STANDARDS:  
DISHWASHER - ENERGY STAR RATED  
REFRIGERATOR (IF PROVIDED) - ENERGY STAR RATED  
WASHING MACHINE - ENERGY STAR RATED  
DRYER - ENERGY STAR RATED, VENTLESS DRYER WITH MINIMUM CEF RATING OF 5.2

| FLOOR PLAN LEGEND |               |                                                                                                 |
|-------------------|---------------|-------------------------------------------------------------------------------------------------|
| SYMBOL            | DESCRIPTION   | NOTES                                                                                           |
|                   | EXISTING WALL | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)<br>8" CONCRETE WALL (EXT.) |
|                   | NEW WALL      | 2X6 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |
|                   | DEMO WALL     | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |

| SYMBOLS LEGEND |                                                                         |
|----------------|-------------------------------------------------------------------------|
| SYMBOL         | DESCRIPTION                                                             |
|                | FAN MIN 50 CFM, BATH, TOILET ROOM & LAUNDRY<br>FAN MIN 100 CFM, KITCHEN |
|                | COMBINED CARBON MONOXIDE DETECTOR & SMOKE DETECTORS                     |
|                | SMOKE DETECTOR INTERCONNECTED AND HARDWIRED W/ BATTERY BACKUP           |
|                | CARBON MONOXIDE DETECTOR, INTERCONNECTED AND HARDWIRED W/BATTERY BACKUP |
|                | WHOLE HOUSE VENTILATION 35 CFM CONTINUOUSLY                             |

BUILD STUFF

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HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

PROPOSED LEVEL 1

A102

Scale: 1/4" = 1'-0"

BUILD STUFF

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| REVISION TABLE |           |                      |  |
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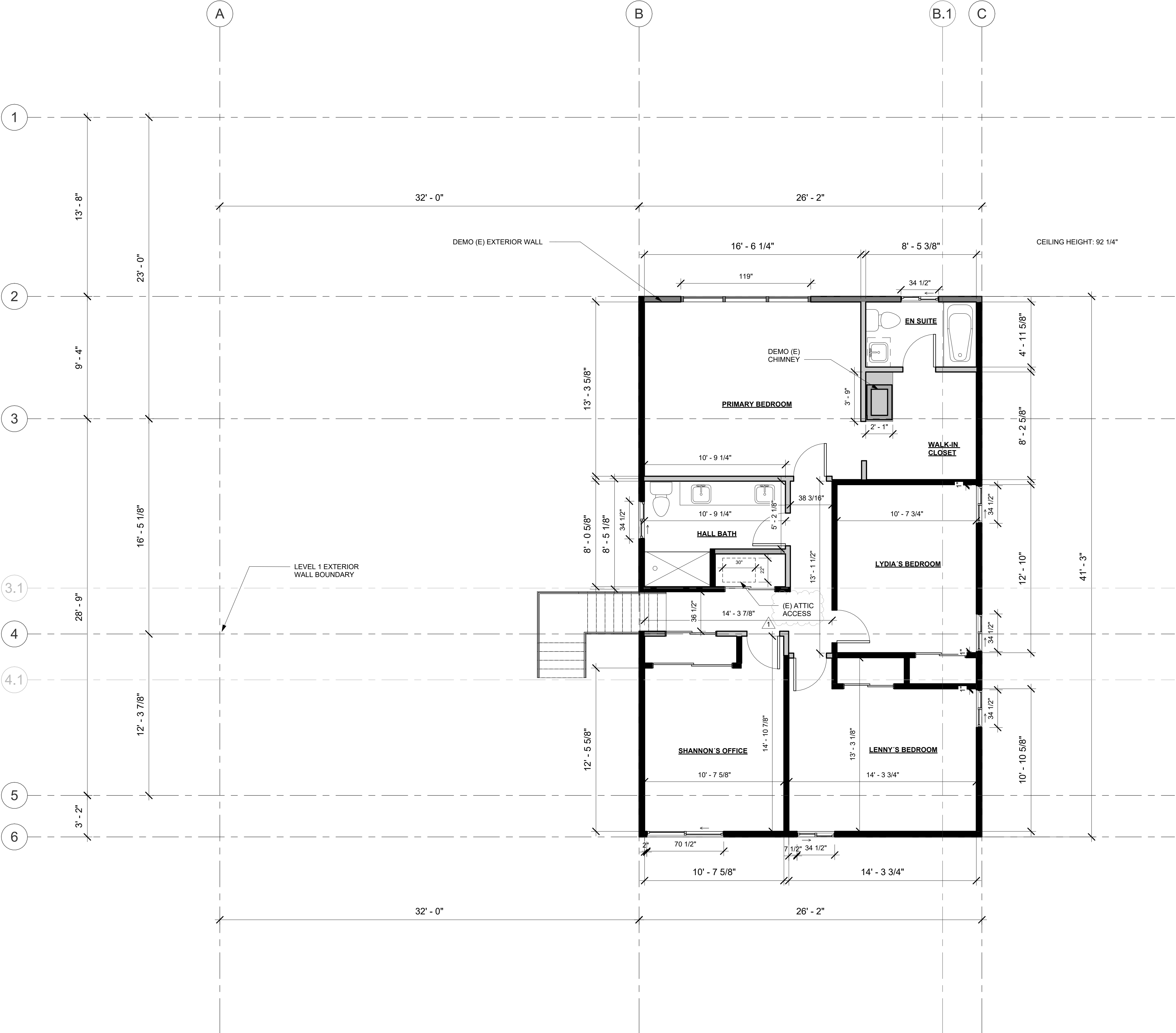
Record #: 2402-026

Date: 09/19/24

DEMO LEVEL 2

A103

Scale: 1/4" = 1'-0"



DEMO PLAN NOTES:

- CONTRACTOR TO VERIFY MEASUREMENTS OF EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES.
- DEMO ALL EXISTING BRICK FIREPLACES.
- DEMOLITION: ITEMS INDICATED ON PLANS TO BE DEMOLISHED, SHALL BE COMPLETELY REMOVED AND DISPOSED UNLESS NOTED OTHERWISE. CONTRACTOR/OWNER RESPONSIBLE FOR REVIEW OF THE HAZARDOUS MATERIALS ABATEMENT, REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS IF APPLICABLE FOR CUTTING AND PATCHING WORK.

EXISTING CONDITION NOTES:

- (E) EXTERIOR WALLS: 2X4 STUD @16" O.C.  
8" CONCRETE FOUNDATION WALLS WITH FOOTINGS.
- (E) FLOOR STRUCTURE: WOOD FRAMED CRAWLSPACE FLOOR AT MAIN LEVEL, SLAB ON GRADE AT GARAGE, AND WOOD FRAMED FLOOR AT SECOND LEVEL.
- (E) ROOF STRUCTURE: SITE-CUT ROOF TRUSSES.
- (E) HEATING: CENTRAL FORCED AIR HEATING - NATURAL GAS - PUBLIC SUPPLY, GAS METER.
- (E) HOT WATER UNIT: GAS FUELED.
- (E) ATTIC: VENTED THROUGH SOFFIT AND ROOF VENTS.

STRUCTURAL ALTERATION CALCULATION:

PER MICC 19.01.050 (D)(1)(b)(iii)  
REFERENCE DEMO PLANS ON SHEET A101 & A103 FOR DIMENSIONS OF STRUCTURALLY ALTERED WALLS

PERCENTAGE OF EXTERIOR WALLS ALTERED =

(SUM OF THE LENGTH OF EXISTING EXTERIOR WALLS TO BE STRUCTURALLY ALTERED) ÷ (SUM OF THE LENGTH OF EXISTING EXTERIOR WALLS)

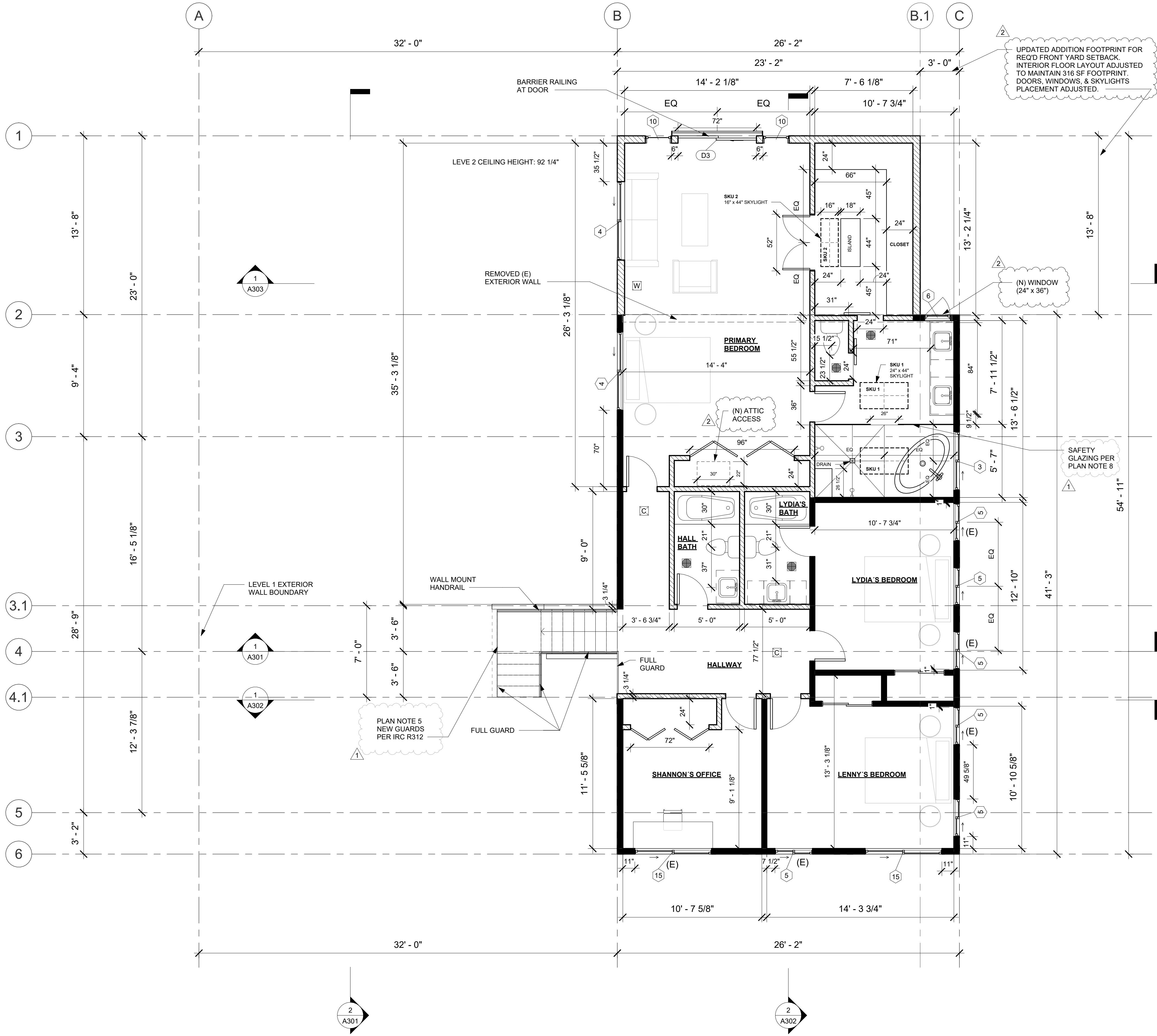
(65.4 FEET) ÷ (204.21 FEET) = **32%**

(A) THE "SUM OF THE LENGTH OF EXISTING EXTERIOR WALLS TO BE STRUCTURALLY ALTERED" IS THE SUM OF EACH WALL SEGMENT THAT IS COMPLETELY DEMOLISHED.

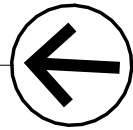
(B) THE "SUM OF THE LENGTH OF EXTERIOR WALLS" IS THE SUM OF THE LENGTHS OF EACH EXTERIOR WALL SEGMENT OF A STRUCTURE OR BUILDING.

FLOOR PLAN LEGEND

| SYMBOL | DESCRIPTION   | NOTES                                                                                           |
|--------|---------------|-------------------------------------------------------------------------------------------------|
|        | EXISTING WALL | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)<br>8" CONCRETE WALL (EXT.) |
|        | NEW WALL      | 2X6 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |
|        | DEMO WALL     | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |



1 LEVEL 2  
1/4" = 1'-0"



PLAN NOTES:

- CONTRACTOR TO VERIFY MEASUREMENTS OF EXISTING CONDITIONS PRIOR TO CONSTRUCTION. DIMENSIONS SUBJECT TO CONVENTIONAL TOLERANCES.
- REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES INCLUDING UNIT SIZE.
- GAS INSERT FIREPLACE, VERIFY REQUIRED FRAMING WIDTH, HEIGHT, AND DEPTH PER MANUFACTURER SPECIFICATIONS.
- REPLACE (E) GLASS PANELS IN NEW 2X6 WALL - CONTRACTOR TO VERIFY THE (E) GLASS FRAME AND PANEL DIMENSIONS FOR REPLACEMENT.
- STAIR DIMENSIONS PER IRC R311.7, MAIN INTERIOR STAIR SHALL BE REBUILT AND NEW GUARDS WILL BE INSTALLED TO COMPLY WITH IRC R312.
- AIR EXHAUST OPENINGS SHALL TERMINATE NOT LESS THAN 3 FEET FROM OPERABLE AND NONOPERABLE OPENINGS INTO THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES EXCEPT WHERE THE OPENING IS LOCATED 3 FEET ABOVE THE AIR INTAKE.
- PROVIDE FIREBLOCKING FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING.
- SAFETY GLAZING REQUIRED AT WET SURFACES (PER IRC R308.4.5 ) GLAZING IN WALLS, ENCLOSURES CONTAINING OR FACING HOT TUBS, SPAS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS, SHOWERS AND SIMILAR, WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE CONSIDERED A HAZARDOUS LOCATION. APPLIES TO SINGLE GLAZING AND EACH PANE IN MULTIPLE GLAZING.

GUARDS (PER IRC R312.1)

REQUIRED HEIGHT: MAX 36 INCHES AS MEASURED VERTICALLY ABOVE THE ADJACENT WALKING SURFACE OR THE LINE CONNECTING THE NOSINGS.  
MAX OPENINGS: FROM THE WALKING SURFACE TO THE REQUIRED GUARD HEIGHT THAT ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER.  
MAX OPENINGS AT STAIRS: THE TRIANGULAR OPENINGS AT THE OPEN SIDE OF STAIR, FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD, SHALL NOT ALLOW PASSAGE OF A SPHERE 6 INCHES IN DIAMETER.  
GUARDS ON THE OPEN SIDE OF STAIRS SHALL NOT HAVE OPENINGS THAT ALLOW PASSAGE OF A SPHERE 4 3/8 INCHES IN DIAMETER.

WHOLE HOUSE VENTILATION:

CALCULATION PER TABLE M1505.4.3(1)

PROPOSED ADDITION CONDITIONED SF: 632 SF  
NUMBER OF BEDROOMS: 2  
VENTILATION AIRFLOW RATE (CFM): 35 CFM

WHOLE HOUSE VENTILATION: 35 CFM CONTINUOUSLY

| FLOOR PLAN LEGEND |               |                                                                                                 |
|-------------------|---------------|-------------------------------------------------------------------------------------------------|
| SYMBOL            | DESCRIPTION   | NOTES                                                                                           |
|                   | EXISTING WALL | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)<br>8" CONCRETE WALL (EXT.) |
|                   | NEW WALL      | 2X6 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |
|                   | DEMO WALL     | 2X4 STUD @ 16" O.C. (EXT. U.N.O)<br>2X4 STUD @ 16" O.C. (INT. U.N.O)                            |

| SYMBOLS LEGEND |                                                                         |
|----------------|-------------------------------------------------------------------------|
| SYMBOL         | DESCRIPTION                                                             |
|                | FAN MIN 50 CFM, BATH, TOILET ROOM & LAUNDRY<br>FAN MIN 100 CFM, KITCHEN |
|                | COMBINED CARBON MONOXIDE DETECTOR & SMOKE DETECTORS                     |
|                | SMOKE DETECTOR INTERCONNECTED AND HARDWIRED W/ BATTERY BACKUP           |
|                | CARBON MONOXIDE DETECTOR, INTERCONNECTED AND HARDWIRED W/BATTERY BACKUP |
|                | WHOLE HOUSE VENTILATION 35 CFM CONTINUOUSLY                             |

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HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

PROPOSED LEVEL 2

A104

Scale: 1/4" = 1'-0"

BUILD STUFF

BUILD STUFF LLC  
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| REVISION TABLE |      |          |             |
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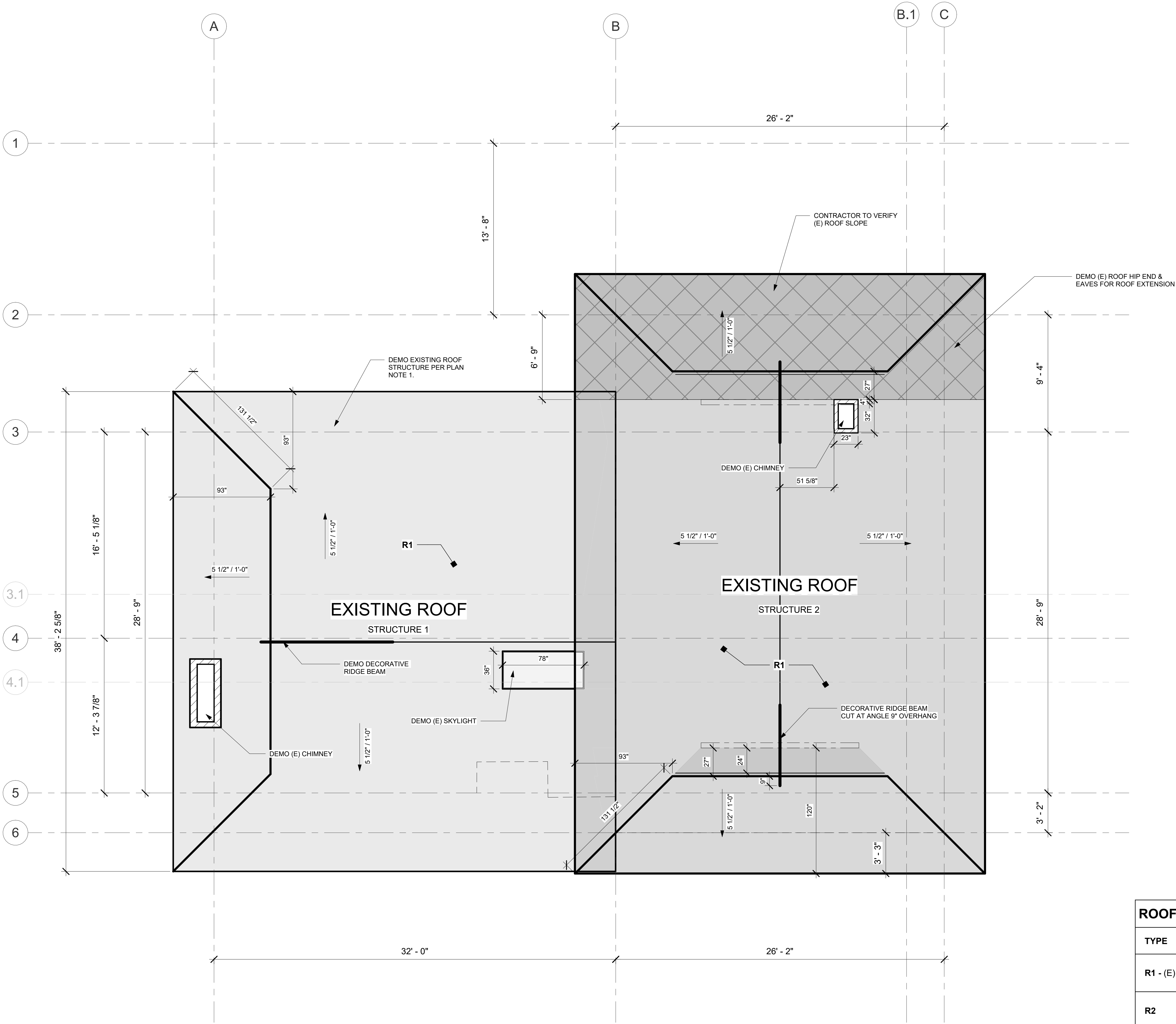
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Date: 09/19/24

DEMO ROOF PLAN

A105

Scale: 1/4" = 1'-0"



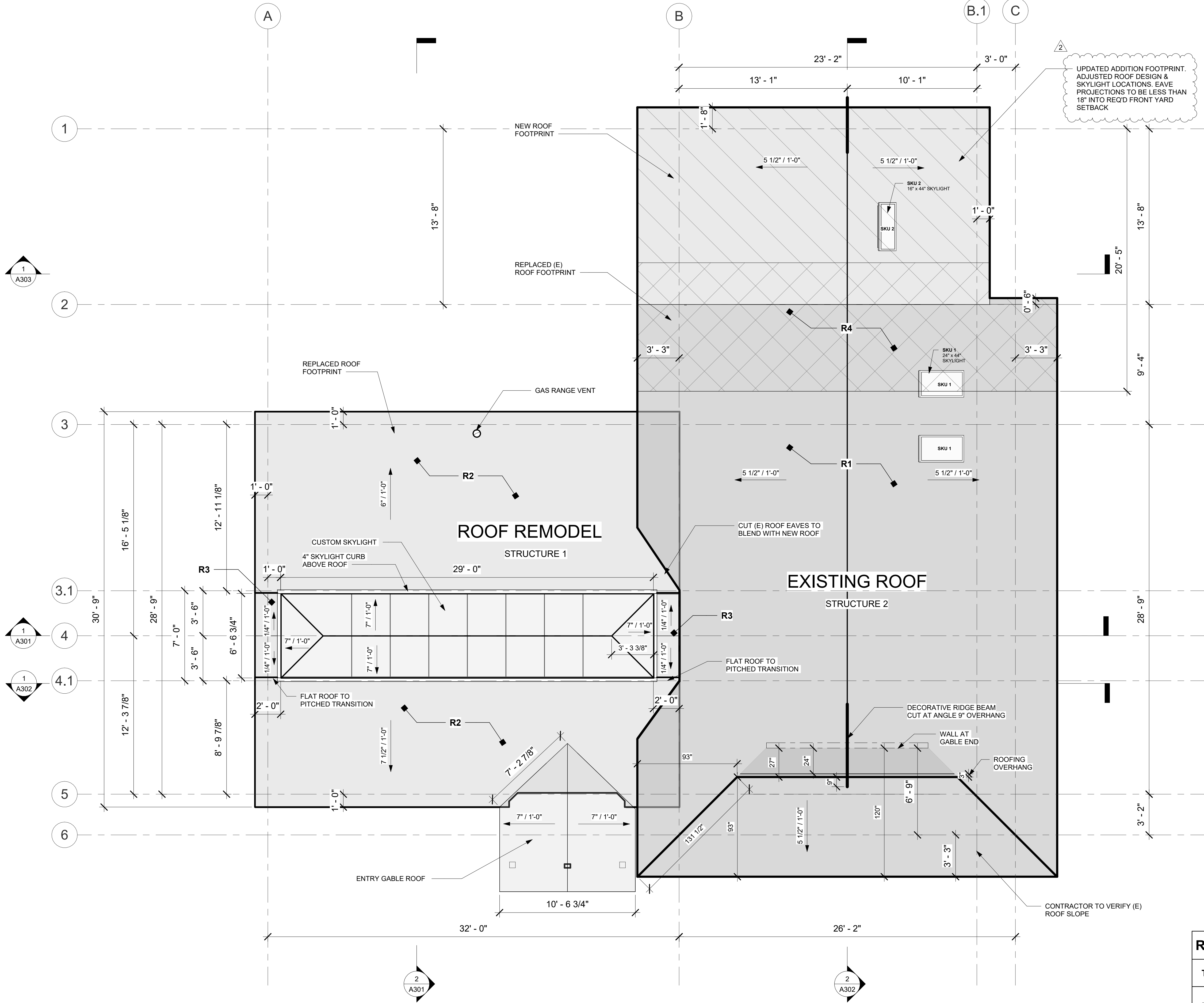
PLAN NOTES:

- DEMO EXISTING ROOF OF MAIN LEVEL STRUCTURE. SPECIAL PREACUTIONS MUST BE TAKEN WHEN CLIPPING EXISTING DUCTWORK AND ELECTRICAL WIRES DURING DEMOLITION.
- EXISTING END HIP ROOF TO BE VERIFIED ON-SITE TO MATCH EXACT EXISTING CONDITIONS ONCE ROOFING MATERIAL HAS BEEN REMOVED AND EXISTING STRUCTURE IS EXPOSED.
- DEMOLITION: ITEMS INDICATED ON PLANS TO BE DEMOLISHED, SHALL BE COMPLETELY REMOVED AND DISPOSED UNLESS NOTED OTHERWISE. CONTRACTOR/OWNER RESPONSIBLE FOR REVIEW OF THE HAZARDOUS MATERIALS ABATEMENT, REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS IF APPLICABLE FOR CUTTING AND PATCHING WORK.

EXISTING CONDITION NOTES:

- (E) EXTERIOR WALLS: 2X4 STUD @16" O.C.
- 8" CONCRETE FOUNDATION WALLS WITH FOOTINGS.
- (E) FLOOR STRUCTURE: WOOD FRAMED CRAWLSPACE FLOOR AT MAIN LEVEL, SLAB ON GRADE AT GARAGE, AND WOOD FRAMED FLOOR AT SECOND LEVEL.
- (E) ROOF STRUCTURE: SITE-CUT ROOF TRUSSES.
- (E) HEATING: CENTRAL FORCED AIR HEATING - NATURAL GAS - PUBLIC SUPPLY, GAS METER.
- (E) HOT WATER UNIT: GAS FUELED.
- (E) ATTIC: VENTED THROUGH SOFFIT AND ROOF VENTS.

| ROOF ASSEMBLIES |        |                                                                                                                                                        |
|-----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE            | RATING | ASSEMBLY                                                                                                                                               |
| R1 - (E)        | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING<br>-SITE-CUT TRUSSES<br>-BATT INSULATION, 1/2" GWB CEILING                                                  |
| R2              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER SRTUCT.<br>-2 X 12 RAFTERS PER SRTUCT.<br>-10-1/4" HIGH PERFORM. BATT INSULATION R-38, 1/2" GWB CEILING |
| R3              | 0-HR   | -TPO, ICE AND WATER BARRIER, SHEATHING PER SRTUCT.<br>- 2 X 12 RAFTERS PER STRUCT.<br>-10-1/4" HP BATT INSULATION R-38, 1/2" GWB CEILING               |
| R4              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER STRUCT.<br>-PREFABRICATED TRUSSES OR RAFTERS PER STRUCT.<br>-BATT INSULATION MIN R-49, 1/2" GWB CEILING |



PLAN NOTES:

- STRUCTURAL SPECIFICATIONS PER STRUCTURAL PLANS.
- THERMOSET SINGLE-PLY MEMBRANE ROOFS SHALL HAVE A DESIGN SLOPE OF NOT LESS THAN ONE-FOURTH UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) FOR DRAINAGE CEILINGS VAULTED - SINGLE RAFTER MUST HAVE A MIN INSULATION VALUE OF R38 WITH THE FULL INSULATION DEPTH EXTENDING OVER THE TOP PLATE OF THE EXTERIOR WALL.
- CEILINGS W/ ATTICS MINIMUM INSULATION VALUE OF R-49.
- PROVIDE FIREBLOCKING FROM THE WALL TOP PLATE TO THE UNDERSIDE OF THE ROOF SHEATHING.
- ROOF PITCH PER PLAN UNLESS NOTED OTHERWISE.

SKYLIGHTS AND SLOPED GLAZING (PER IRC R308.6)

R308.6.2 MATERIALS: MORE THAN 12 FEET ABOVE A WALKING SURFACE THE INTERLAYER THICKNESS SHALL BE NOT LESS THAN: LAMINATED GLASS WITH POLYVINYL BUTYRAL INTERLAYER THICKNESS NOT LESS THAN 0.030 INCH (0.76 MM).

CURBS FOR SKYLIGHTS (PER IRC R308.6.8)

UNIT SKYLIGHTS INSTALLED IN A ROOF WITH A PITCH OF LESS THAN THREE UNITS VERTICAL IN 12 UNITS HORIZONTAL (25-PERCENT SLOPE) SHALL BE MOUNTED ON A CURB EXTENDING NOT LESS THAN 4 INCHES ABOVE THE PLANE OF THE ROOF, UNLESS SPECIFIED IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

UNIT SKYLIGHTS TESTING AND LABELING (PER IRC R308.6.9)

SHALL BE TESTED BY AN APPROVED INDEPENDENT LABORATORY, AND BEAR A LABEL IDENTIFYING MANUFACTURER, PERFORMANCE GRADE RATING AND APPROVED INSPECTION AGENCY TO INDICATE COMPLIANCE WITH THE REQUIREMENTS OF AAMA/WDMA/CSA 101/1.S.2/A440.

THERMOSET SINGLE-PLY ROOFING (PER IRC R905.12)

INSTALLATION OF THERMOSET SINGLE-PLY ROOFING SHALL COMPLY WITH THE PROVISIONS OF THIS SECTION. SHALL HAVE A DESIGN SLOPE OF MINIMUM ONE-FOURTH UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) FOR DRAINAGE. R905.12.3 APPLICATION: THERMOSET SINGLE-PLY ROOFS SHALL BE INSTALLED IN ACCORDANCE WITH THIS CHAPTER AND THE MANUFACTURER'S INSTRUCTIONS.

ROOF VENTILATION CALCULATIONS: (PER IRC R806)

ATTIC VENTILATION REQUIRED:  
1 SF OF VENTILATION AREA FOR EACH 300 SF OF ATTIC AREA.  
EXISTING VENTED ATTIC: VENTED THROUGH SOFFIT AND ROOF VENTS.

NEW VENTED ATTIC AREA: 493 SQ.FT  
493 / 300 = 1.6 SQ.FT OF NFVA

| 50% INTAKE                                                                                  |       | 50% OUTLET                                                                               |       |
|---------------------------------------------------------------------------------------------|-------|------------------------------------------------------------------------------------------|-------|
| REQUIRED INTAKE (SQ.FT)                                                                     | 0.8   | REQUIRED OUTLET (SQ.FT)                                                                  | 0.8   |
| SQ.IN PER (SQ.FT)                                                                           | 144   | SQ.IN PER (SQ.FT)                                                                        | 144   |
| REQUIRED INTAKE (SQ.IN)                                                                     | 115.2 | REQUIRED OUTLET (SQ.IN)                                                                  | 115.2 |
| LINEAR FT OF INTAKE                                                                         | 63.8  | LINEAR FT OF OUTLET                                                                      | 12.1  |
| INTAKE VENT SQ.IN PER LINEAR FT                                                             | 1.8   | OUTLET VENT SQ.IN PER LINEAR FT                                                          | 9.5   |
| INTAKE VENT SPECS:<br>COR-A-VENT<br>SOFFIT VENT R5-400<br>18.75 SQ.IN NFVA/LF<br>OR SIMILAR |       | OUTLET VENT SPECS:<br>COR-A-VENT<br>RIDGE VENT V-300<br>13.5 SQ.IN NFVA/LF<br>OR SIMILAR |       |

| ROOF ASSEMBLIES |        |                                                                                                                                                        |
|-----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE            | RATING | ASSEMBLY                                                                                                                                               |
| R1 - (E)        | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING<br>-SITE-CUT TRUSSES<br>-BATT INSULATION, 1/2" GWB CEILING                                                  |
| R2              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER SRUUCT.<br>-2 X 12 RAFTERS PER SRUUCT.<br>-10-1/4" HIGH PERFORM. BATT INSULATION R-38, 1/2" GWB CEILING |
| R3              | 0-HR   | -TPO, ICE AND WATER BARRIER, SHEATHING PER SRUUCT.<br>- 2 X 12 RAFTERS PER SRUUCT.<br>-10-1/4" HP BATT INSULATION R-38, 1/2" GWB CEILING               |
| R4              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER STRUCT.<br>-PREFABRICATED TRUSSES OR RAFTERS PER STRUCT.<br>-BATT INSULATION MIN R-49, 1/2" GWB CEILING |

BUILD STUFF

BUILD STUFF LLC  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |           | Revision # | Date | Revision Description |
|----------------|-----------|------------|------|----------------------|
| 2              | 9/19/2024 | Revision 2 |      |                      |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

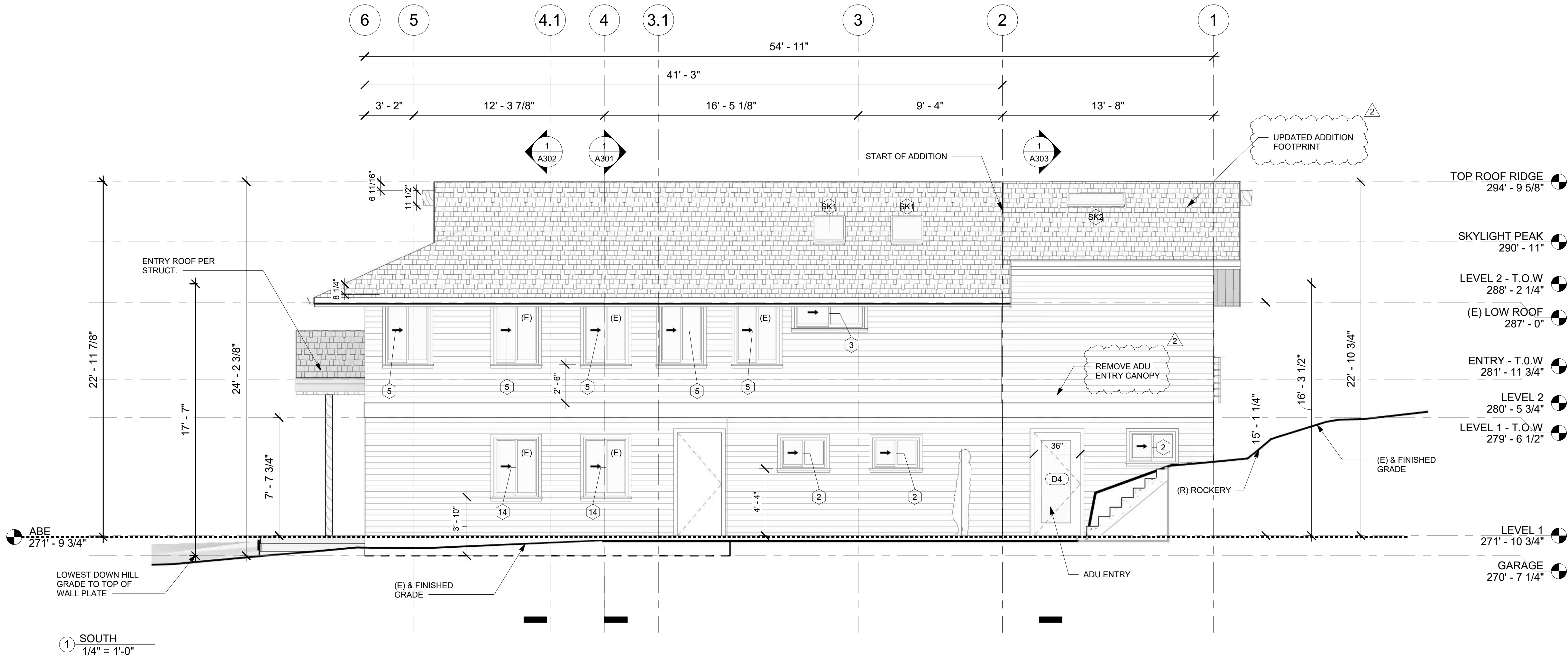
Record #: 2402-026

Date: 09/19/24

PROPOSED ROOF  
PLAN

A106

Scale: 1/4" = 1'-0"



- WINDOW AND DOOR NOTES:**
- ALL FENESTRATION TO BE NFRC-CERTIFIED.
  - CONTRACTOR TO VERIFY (E) WINDOW ROUGH OPENING MEASURMENTS PRIOR TO PROCURMENT. VERIFY ROUGH OPENING DIMENSIONS AND FINISH REQUIREMENTS OF NEW WINDOWS.
  - HEADER SIZING PER STRUCTURAL PLANS.
  - REPLACE ALL EXISTING WINDOWS WITH UPDATED WINDOWS, IN EXISTING ROUGH OPENING U.N.O
  - (E) - REPLACE ALL EXISTING WINDOWS WITH U-FACTOR OF .30.
  - WINDOWS AT ADDITION TO HAVE A U-FACTOR OF .28 PER ENERGY CODE CREDIT OPTION 1.3.
  - THE ADDITION'S SIDING, ROOFING, & ARCHITECTURAL DETAILS TO MATCH EXISTING CONDITIONS.
  - AN AREA-WEIGHTED AVERAGE OF FENESTRATION PRODUCTS SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQUIREMENTS PER R402.3.1.
  - SAFETY GLAZING SHALL BE PROVIDED ON ALL WINDOWS AND GLAZED DOORS AT HAZARDOUS LOCATIONS PER IRC 308.4 (IRC R310); EGRESS WINDOWS TO PROVIDE 5.7 SF MINIMUM NET OPENING; 20" MINIMUM CLEAR HEIGHT; SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WINTHOUT USE OF KEYS OR TOOLS.

### ELEVATION LEGEND

| SYMBOL | DESCRIPTION               | NOTES                                          |
|--------|---------------------------|------------------------------------------------|
|        | (E) 4.5" CEDAR LAP SIDING | MATCH (E) SIDING AT ADDITION & NEW EXT. WALLS  |
|        | 3" WOOD SLAT SIDING       | NEW AT ENTRY ACCENT WALL                       |
|        | (E) ASPHALT ROOF SHINGLES | MATCH EXISTING SHINGLES AT NEW & REPLACED ROOF |

| Window Schedule |            |              |              |
|-----------------|------------|--------------|--------------|
| Type Mark       | Type       | Width        | Height       |
| 2               | 36"x24"    | 3' - 0"      | 2' - 0"      |
| 3               | 54" x 24"  | 4' - 6"      | 2' - 0"      |
| 4               | 72" x 24"  | 6' - 0"      | 2' - 0"      |
| 5               | 34" x 52"  | 2' - 10 1/2" | 4' - 4 1/2"  |
| 6               | 24" x 36"  | 2' - 0"      | 3' - 0"      |
| 7               | 70" x 22"  | 5' - 10"     | 1' - 10"     |
| 10              | 24" x 84"  | 2' - 0"      | 7' - 0"      |
| 11              | 36" x 48"  | 3' - 0"      | 4' - 0"      |
| 12              | 132" x 40" | 11' - 0"     | 3' - 4"      |
| 14              | 34" x 46"  | 2' - 10 1/2" | 3' - 10 1/2" |
| 15              | 70" x 52"  | 5' - 10 1/2" | 4' - 4 1/2"  |
| 16              | 72" x 18"  | 6' - 0"      | 1' - 6"      |
| SK1             | 44" x 24"  | 3' - 8"      | 2' - 0"      |
| SK2             | 44" x 16"  | 3' - 8"      | 1' - 4"      |

| Exterior Door Schedule |                                            |          |          |
|------------------------|--------------------------------------------|----------|----------|
| Type Mark              | Type                                       | Width    | Height   |
| D1                     | Exterior Double Sliding Door 94" x 80"     | 7' - 10" | 6' - 8"  |
| D2                     | Exterior Double Front Entry Door 72" x 80" | 6' - 0"  | 6' - 8"  |
| D3                     | Exterior Double Sliding Door 72" x 82"     | 6' - 0"  | 6' - 10" |
| D4                     | Exterior Single Entry Door 36" X 80"       | 3' - 0"  | 6' - 8"  |
| D5                     | Bifold Door Full Glass 132" x 90"          | 11' - 0" | 7' - 6"  |

### BUILD STUFF

**BUILD STUFF LLC**  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |           |                      |  |
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| Revision #     | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |
|                |           |                      |  |
|                |           |                      |  |
|                |           |                      |  |

**HERNANDEZ RESIDENCE**  
**7520 MERCER TERRACE DR**  
**MERCER ISLAND WA, 98040**

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

### N-S ELEVATIONS

**A201**

Scale: 1/4" = 1'-0"

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| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision       | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

W-E ELEVATIONS

A202

Scale: 1/4" = 1'-0"

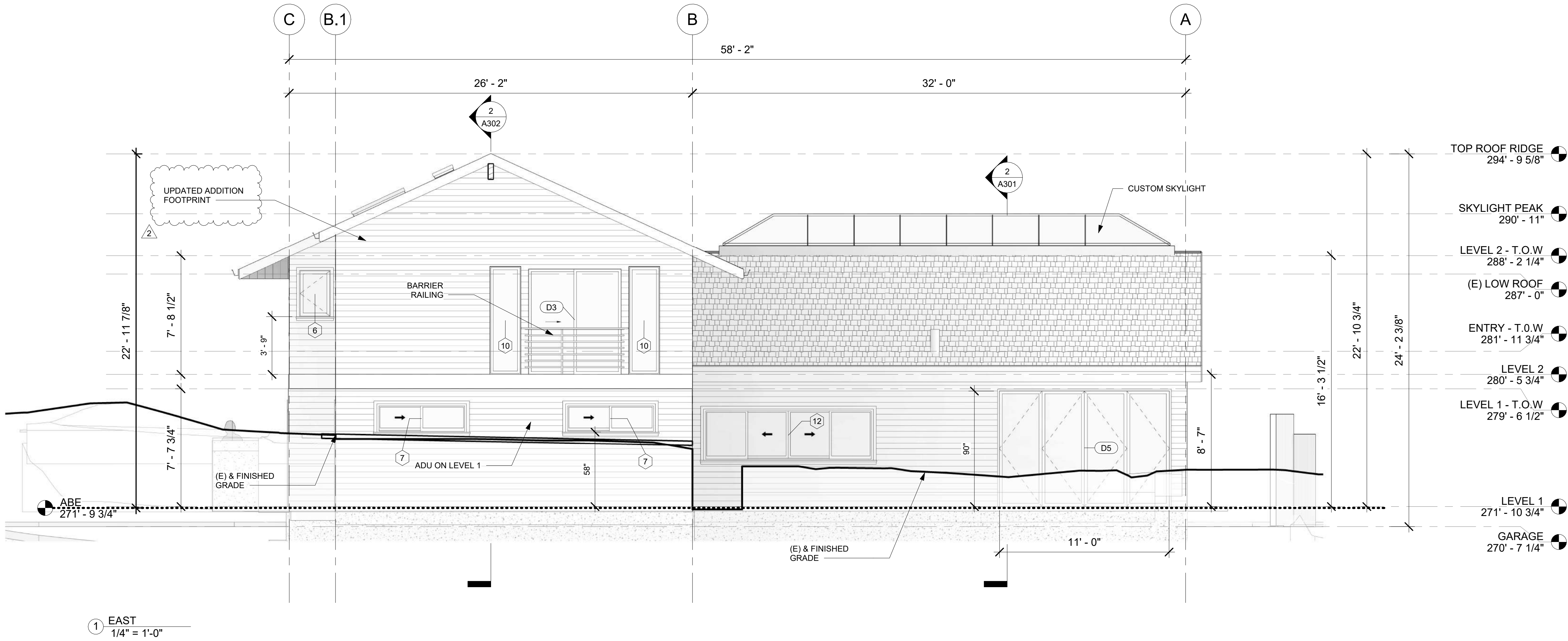
- WINDOW AND DOOR NOTES:**
- ALL FENESTRATION TO BE NFRC-CERTIFIED.
  - CONTRACTOR TO VERIFY (E) WINDOW ROUGH OPENING MEASURMENTS PRIOR TO PROCURMENT. VERIFY ROUGH OPENING DIMENSIONS AND FINISH REQUIREMENTS OF NEW WINDOWS.
  - HEADER SIZING PER STRUCTURAL PLANS.
  - REPLACE ALL EXISTING WINDOWS WITH UPDATED WINDOWS, IN EXISTING ROUGH OPENING U.N.O
  - (E) - REPLACE ALL EXISTING WINDOWS WITH U-FACTOR OF .30.
  - WINDOWS AT ADDITION TO HAVE A U-FACTOR OF .28 PER ENERGY CODE CREDIT OPTION 1.3.
  - THE ADDITION'S SIDING, ROOFING, & ARCHITECTURAL DETAILS TO MATCH EXISTING CONDITIONS.
  - AN AREA-WEIGHTED AVERAGE OF FENESTRATION PRODUCTS SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQUIREMENTS PER R402.3.1.
  - SAFETY GLAZING SHALL BE PROVIDED ON ALL WINDOWS AND GLAZED DOORS AT HAZARDOUS LOCATIONS PER IRC 308.4 (IRC R310); EGRESS WINDOWS TO PROVIDE 5.7 SF MINIMUM NET OPENING; 20" MINIMUM CLEAR HEIGHT; SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WINTHOUT USE OF KEYS OR TOOLS.

ELEVATION LEGEND

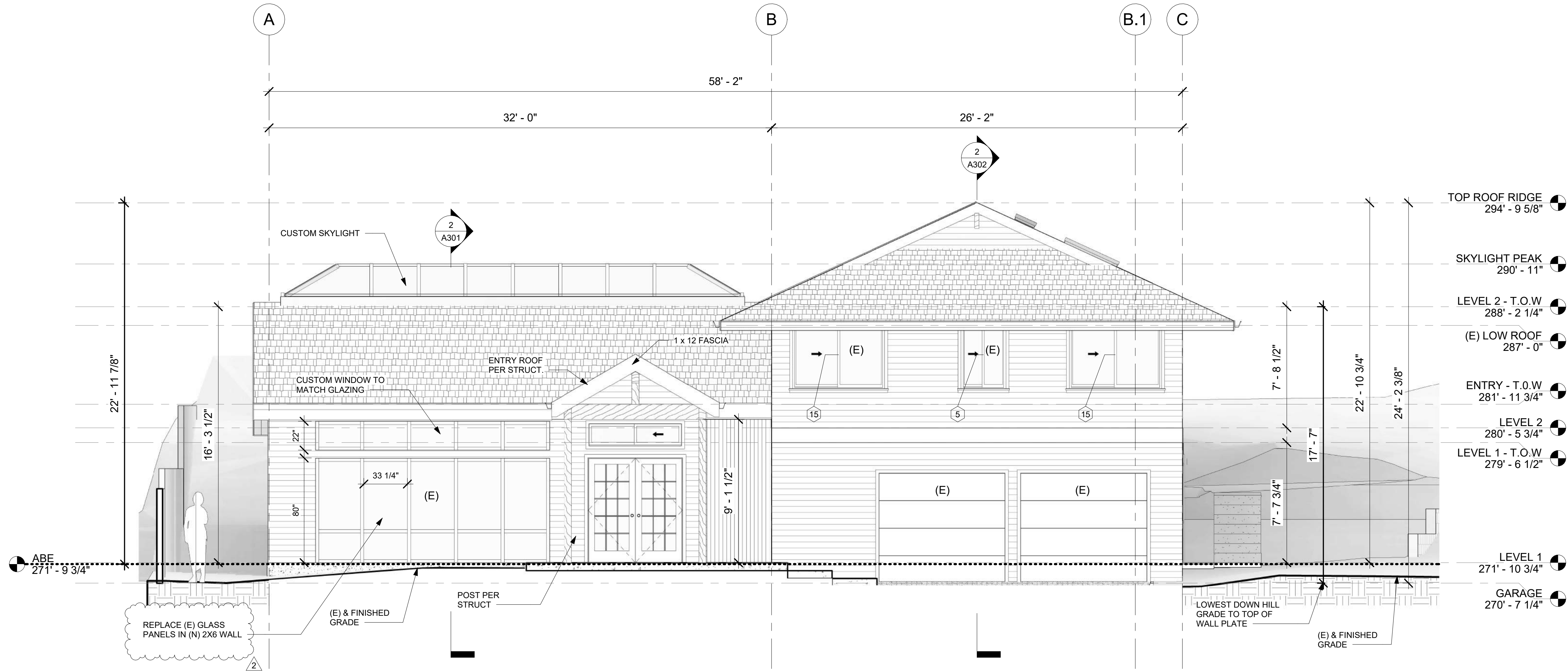
| SYMBOL | DESCRIPTION               | NOTES                                          |
|--------|---------------------------|------------------------------------------------|
|        | (E) 4.5" CEDAR LAP SIDING | MATCH (E) SIDING AT ADDITION & NEW EXT. WALLS  |
|        | 3" WOOD SLAT SIDING       | NEW AT ENTRY ACCENT WALL                       |
|        | (E) ASPHALT ROOF SHINGLES | MATCH EXISTING SHINGLES AT NEW & REPLACED ROOF |

| Window Schedule |            |              |              |
|-----------------|------------|--------------|--------------|
| Type Mark       | Type       | Width        | Height       |
| 2               | 36"x24"    | 3' - 0"      | 2' - 0"      |
| 3               | 54" x 24"  | 4' - 6"      | 2' - 0"      |
| 4               | 72" x 24"  | 6' - 0"      | 2' - 0"      |
| 5               | 34" x 52"  | 2' - 10 1/2" | 4' - 4 1/2"  |
| 6               | 24" x 36"  | 2' - 0"      | 3' - 0"      |
| 7               | 70" x 22"  | 5' - 10"     | 1' - 10"     |
| 10              | 24" x 84"  | 2' - 0"      | 7' - 0"      |
| 11              | 36" x 48"  | 3' - 0"      | 4' - 0"      |
| 12              | 132" x 40" | 11' - 0"     | 3' - 4"      |
| 14              | 34" x 46"  | 2' - 10 1/2" | 3' - 10 1/2" |
| 15              | 70" x 52"  | 5' - 10 1/2" | 4' - 4 1/2"  |
| 16              | 72" x 18"  | 6' - 0"      | 1' - 6"      |
| SK1             | 44" x 24"  | 3' - 8"      | 2' - 0"      |
| SK2             | 44" x 16"  | 3' - 8"      | 1' - 4"      |

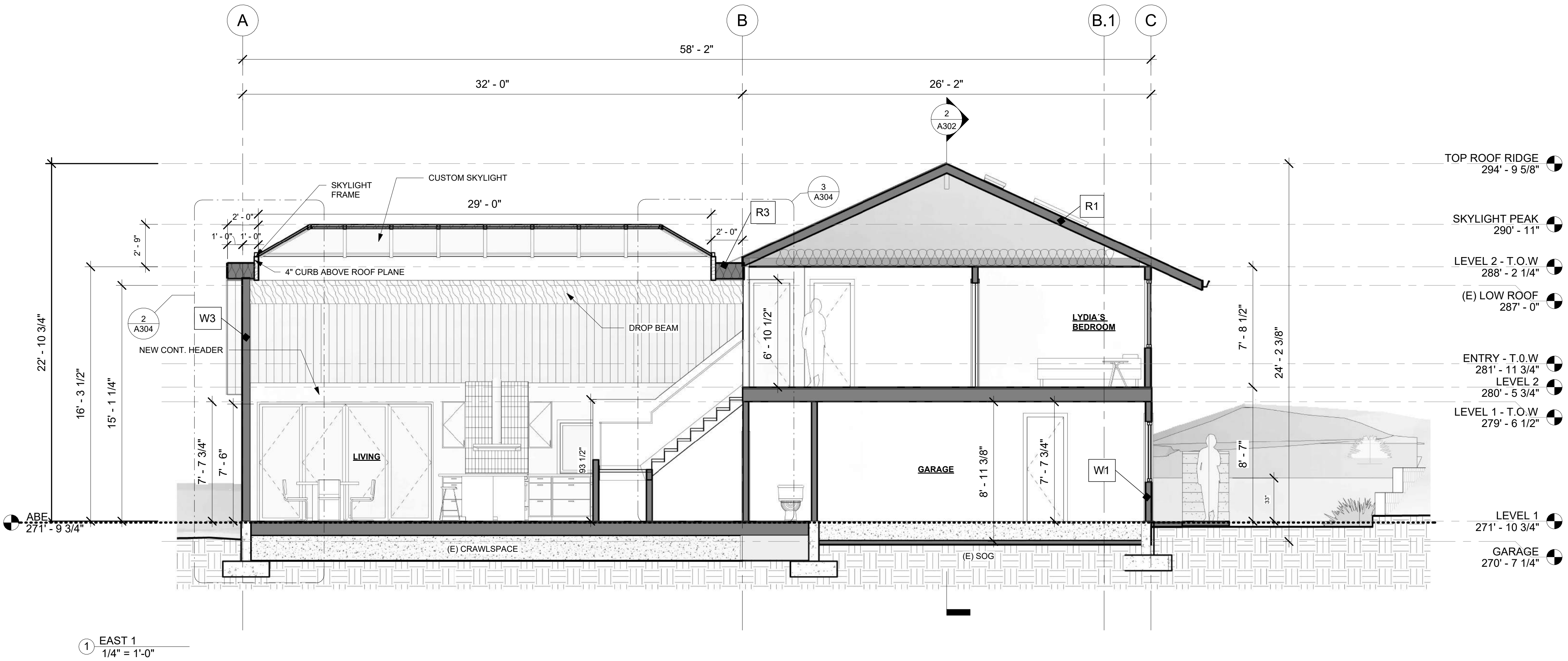
| Exterior Door Schedule |                                            |          |          |
|------------------------|--------------------------------------------|----------|----------|
| Type Mark              | Type                                       | Width    | Height   |
| D1                     | Exterior Double Sliding Door 94" x 80"     | 7' - 10" | 6' - 8"  |
| D2                     | Exterior Double Front Entry Door 72" x 80" | 6' - 0"  | 6' - 8"  |
| D3                     | Exterior Double Sliding Door 72" x 82"     | 6' - 0"  | 6' - 10" |
| D4                     | Exterior Single Entry Door 36" X 80"       | 3' - 0"  | 6' - 8"  |
| D5                     | Bifold Door Full Glass 132" x 90"          | 11' - 0" | 7' - 6"  |



1 EAST  
1/4" = 1'-0"

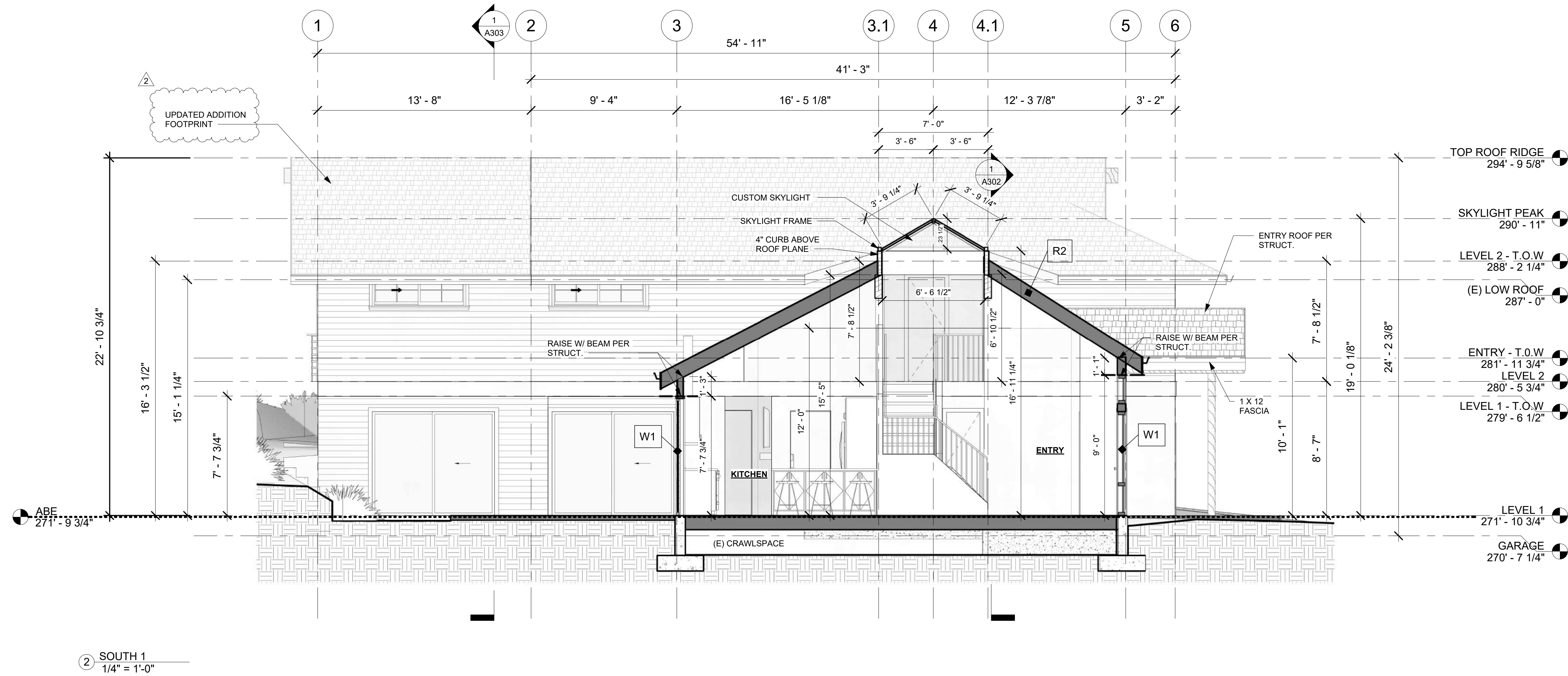


2 WEST  
1/4" = 1'-0"



SECTION NOTES:

1. REFER TO STRUCTURAL PLANS FOR STRUCTURAL SPECIFICATIONS.
2. REFER TO PROPOSED FLOOR AND ROOF PLANS FOR WALL AND ROOF ASSEMBLIES.
3. REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES.



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BUILD STUFF LLC  
206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #:

2402-026

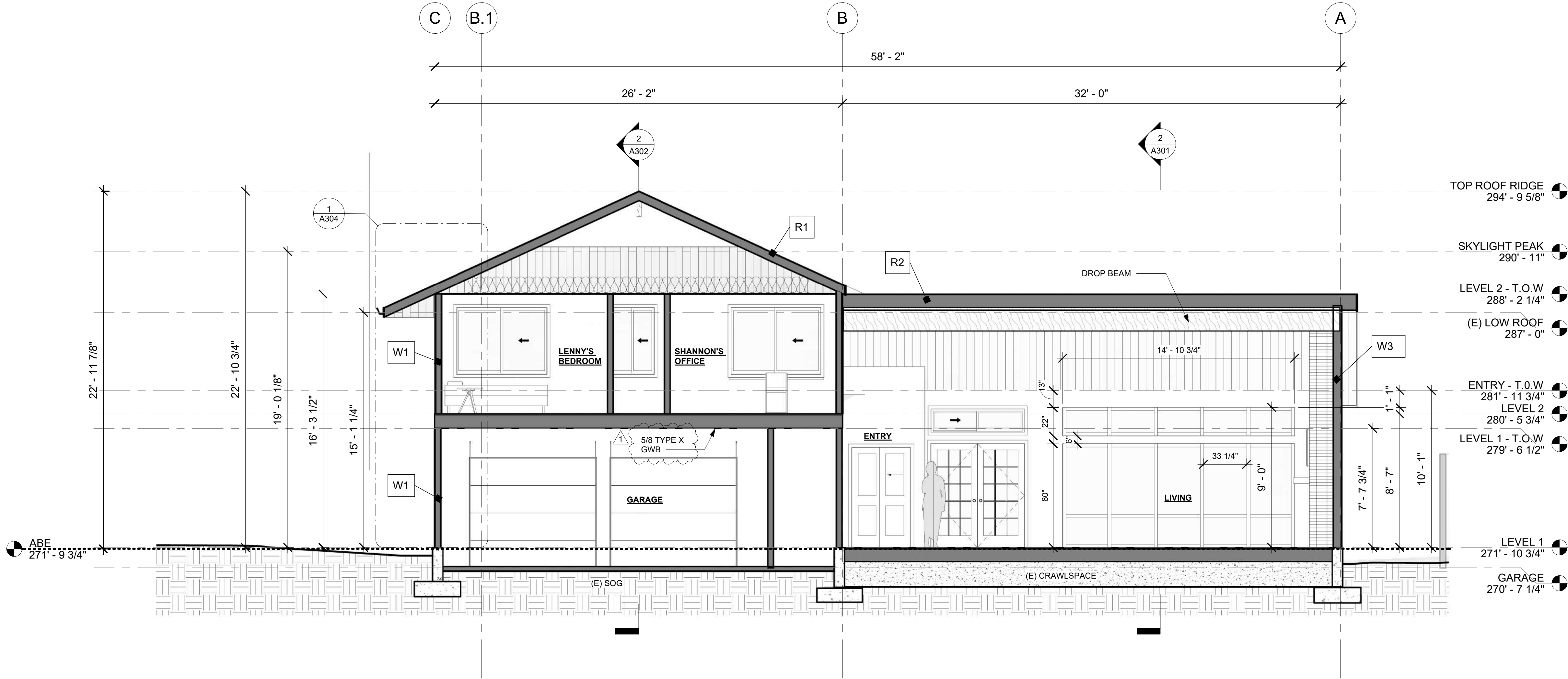
Date:

09/19/24

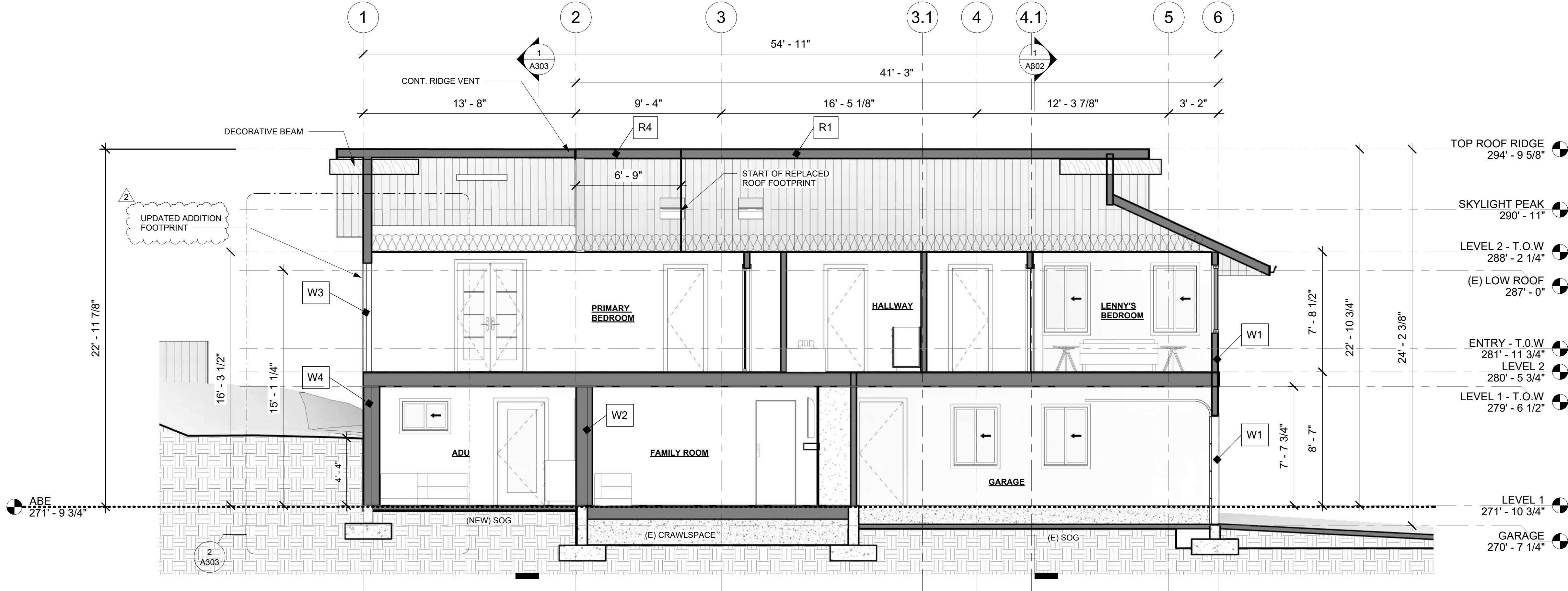
BUILDING SECTIONS  
1

A301

Scale: 1/4" = 1'-0"



1 WEST 1  
1/4" = 1'-0"



2 SOUTH 2  
1/4" = 1'-0"

SECTION NOTES:

1. REFER TO STRUCTURAL PLANS FOR STRUCTURAL SPECIFICATIONS.
2. REFER TO PROPOSED FLOOR AND ROOF PLANS FOR WALL AND ROOF ASSEMBLIES.
3. REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES.

BUILD STUFF

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diego@buildstuffstudios.com

| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 1              | 5/22/2024 | Revision 1           |  |
| 2              | 9/19/2024 | Revision 2           |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

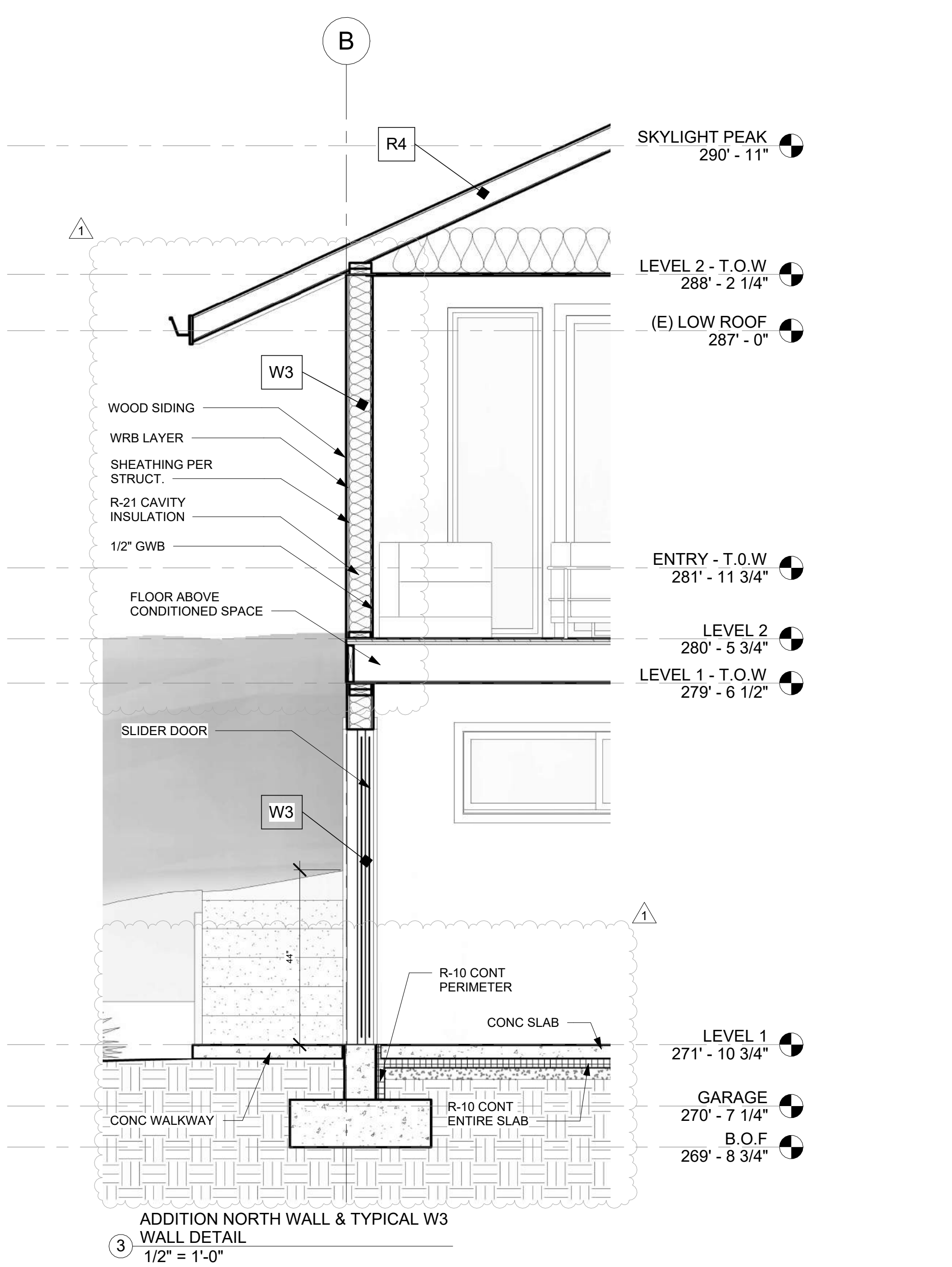
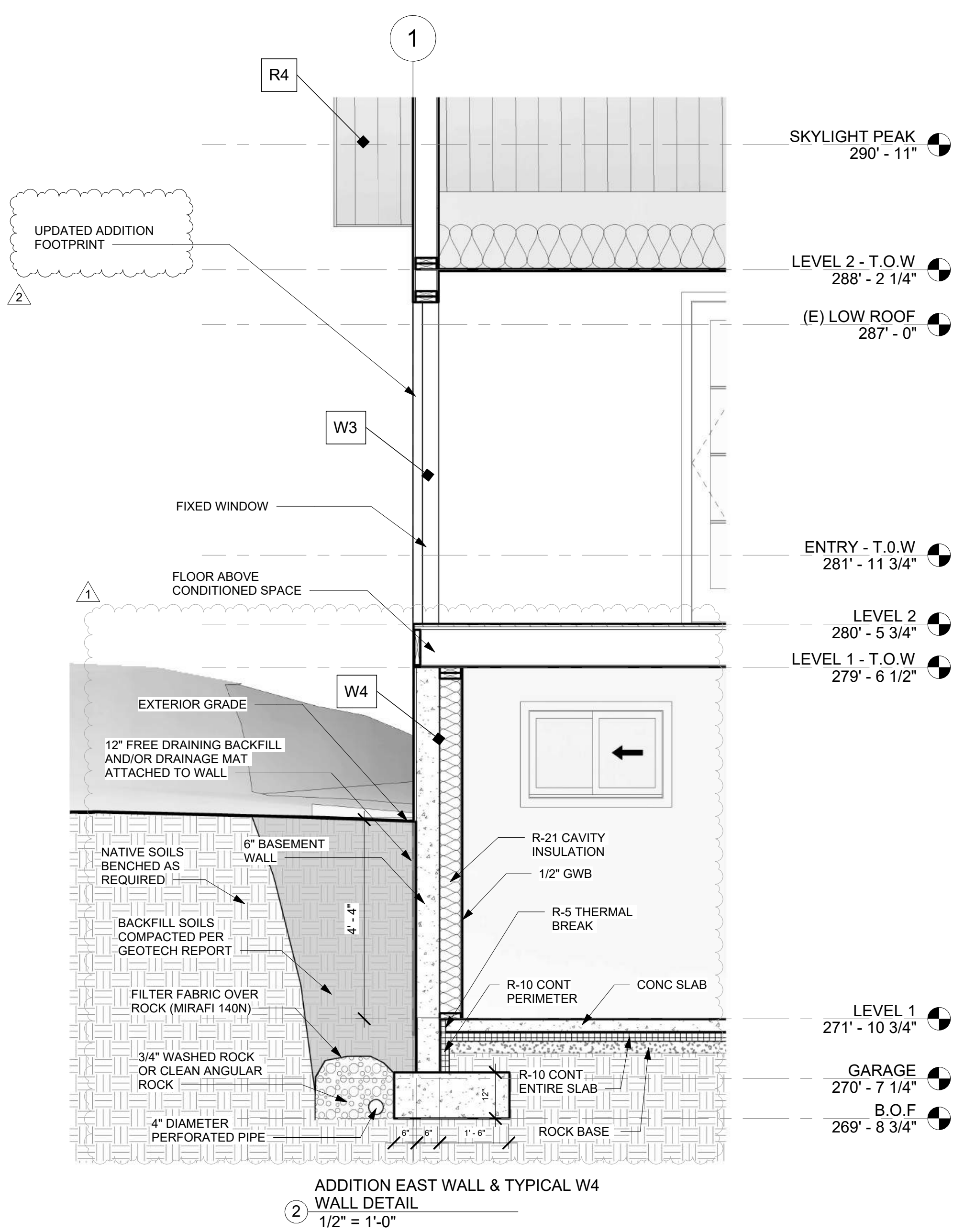
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Date: 09/19/24

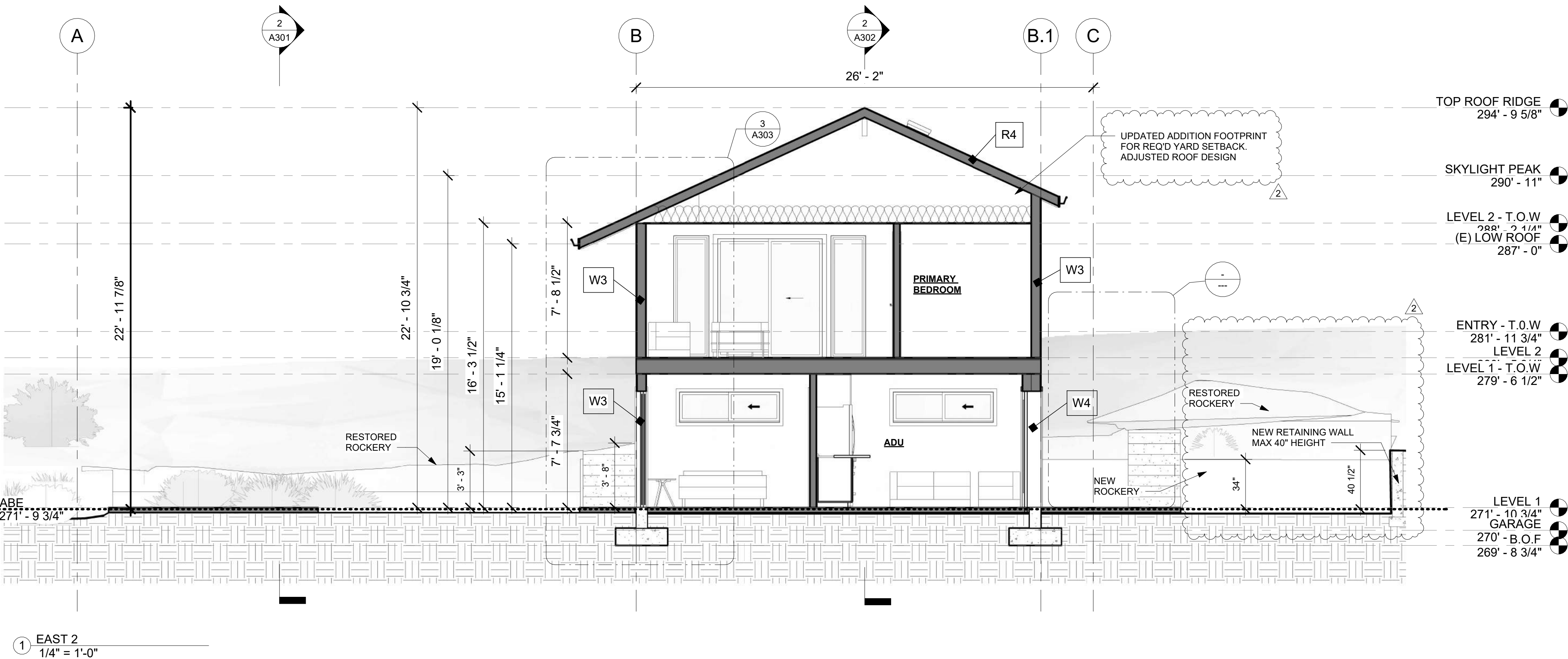
BUILDING SECTIONS  
2

A302

Scale: 1/4" = 1'-0"



- SECTION NOTES:**
- REFER TO STRUCTURAL PLANS FOR STRUCTURAL SPECIFICATIONS.
  - REFER TO PROPOSED FLOOR AND ROOF PLANS FOR WALL AND ROOF ASSEMBLIES.
  - REFER TO ELEVATIONS FOR WINDOW AND EXTERIOR DOOR SCHEDULES.



| WALL ASSEMBLIES |        |                                                                                                                                                                       |
|-----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE            | RATING | ASSEMBLY                                                                                                                                                              |
| W1 - (E)        | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING<br>-2X4 @ 16" O.C.<br>-BATT INSULATION, 1/2" GWB                                                                      |
| W2 - (E)        | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING<br>-2X4 @ 16" O.C., 8" CONCRETE RETAINING WALL<br>-BATT INSULATION, 1/2" GWB                                          |
| W3              | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING PER STRUCT.<br>-2X6 @ 16" O.C.<br>-BATT INSULATION R-21 INT, 1/2" GWB                                                 |
| W4              | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING PER STRUCT.<br>-2X6 @ 16" O.C., 6" CONCRETE RETAINING WALL<br>-BATT INSULATION R-21 INT + R-5 THERMAL BREAK, 1/2" GWB |

| ROOF ASSEMBLIES |        |                                                                                                                                                        |
|-----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE            | RATING | ASSEMBLY                                                                                                                                               |
| R1 - (E)        | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING<br>-SITE-CUT TRUSSES<br>-BATT INSULATION, 1/2" GWB CEILING                                                  |
| R2              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER STRUCT.<br>-2 X 12 RAFTERS PER STRUCT.<br>-10-1/4" HIGH PERFORM. BATT INSULATION R-38, 1/2" GWB CEILING |
| R3              | 0-HR   | -TPO, ICE AND WATER BARRIER, SHEATHING PER STRUCT.<br>-2 X 12 RAFTERS PER STRUCT.<br>-10-1/4" HP BATT INSULATION R-38, 1/2" GWB CEILING                |
| R4              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER STRUCT.<br>-PREFABRICATED TRUSSES OR RAFTERS PER STRUCT.<br>-BATT INSULATION MIN R-49, 1/2" GWB CEILING |

## BUILD STUFF

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206-771-5014  
diego@buildstuffstudios.com

| REVISION TABLE |  | Revision # | Date      | Revision Description |
|----------------|--|------------|-----------|----------------------|
|                |  | 1          | 5/22/2024 | Revision 1           |
|                |  | 2          | 9/19/2024 | Revision 2           |

**HERNANDEZ RESIDENCE**  
**7520 MERCER TERRACE DR**  
**MERCER ISLAND WA, 98040**

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

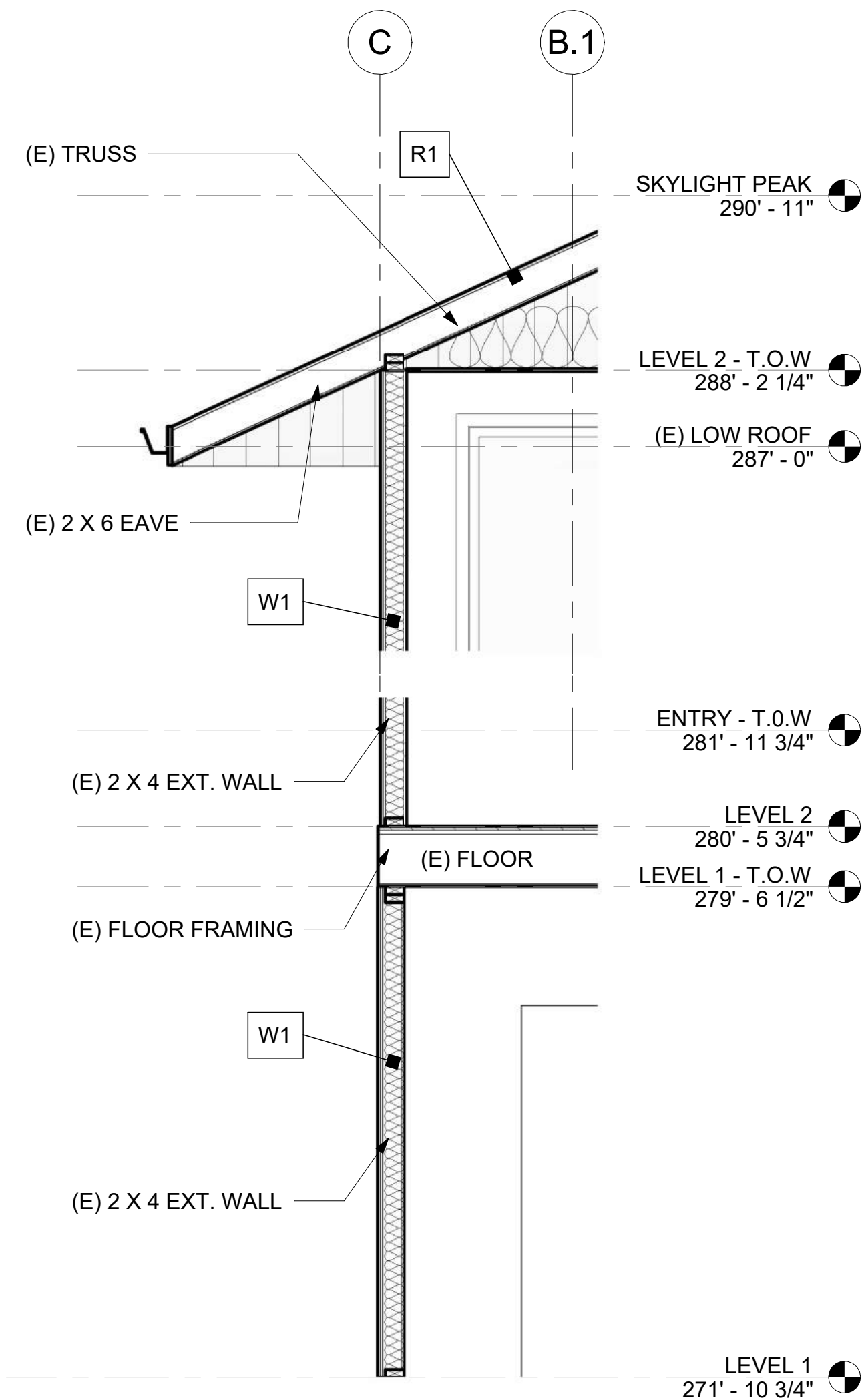
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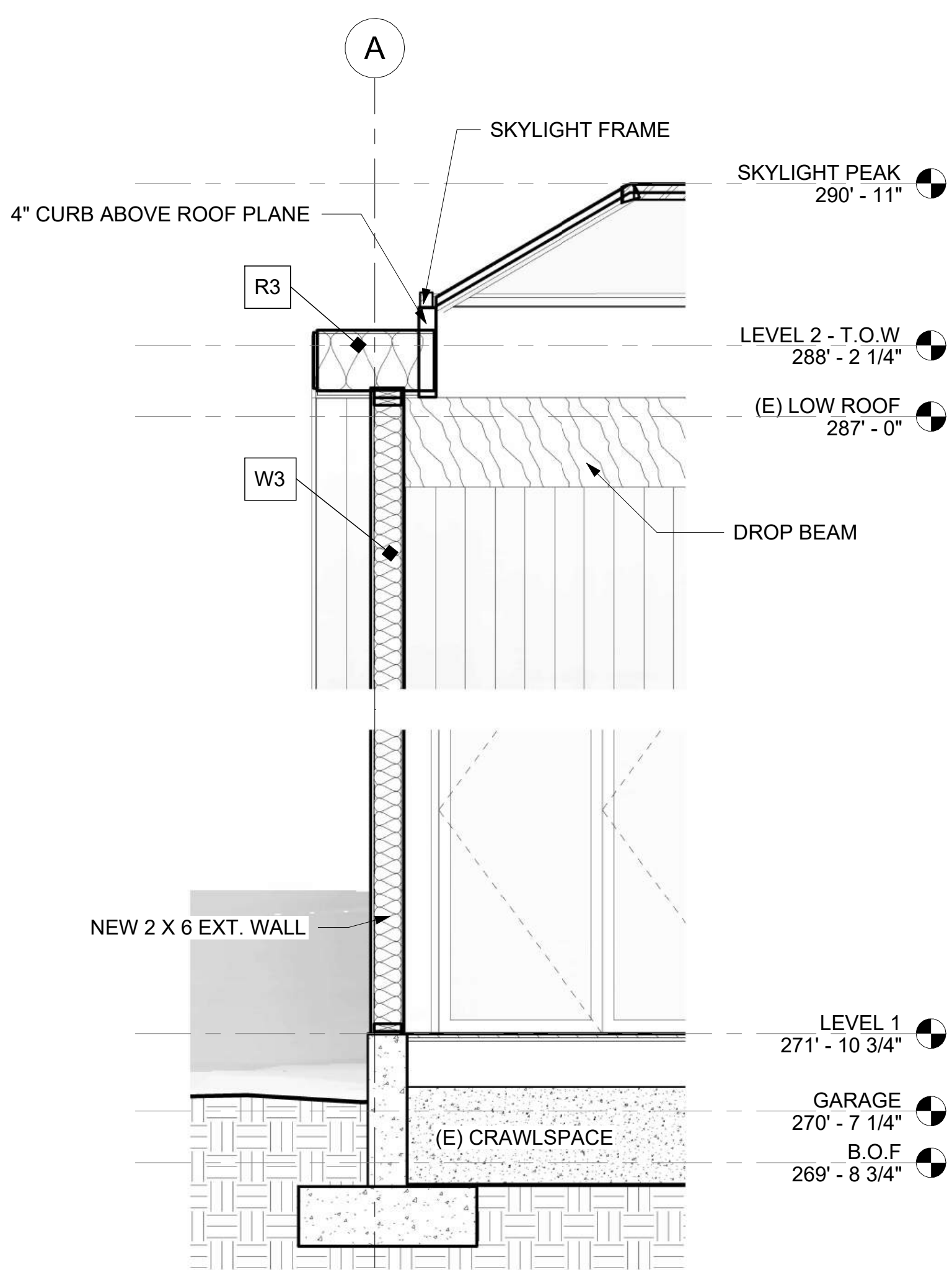
**ADDITION SECTION &  
DETAILS**

**A303**

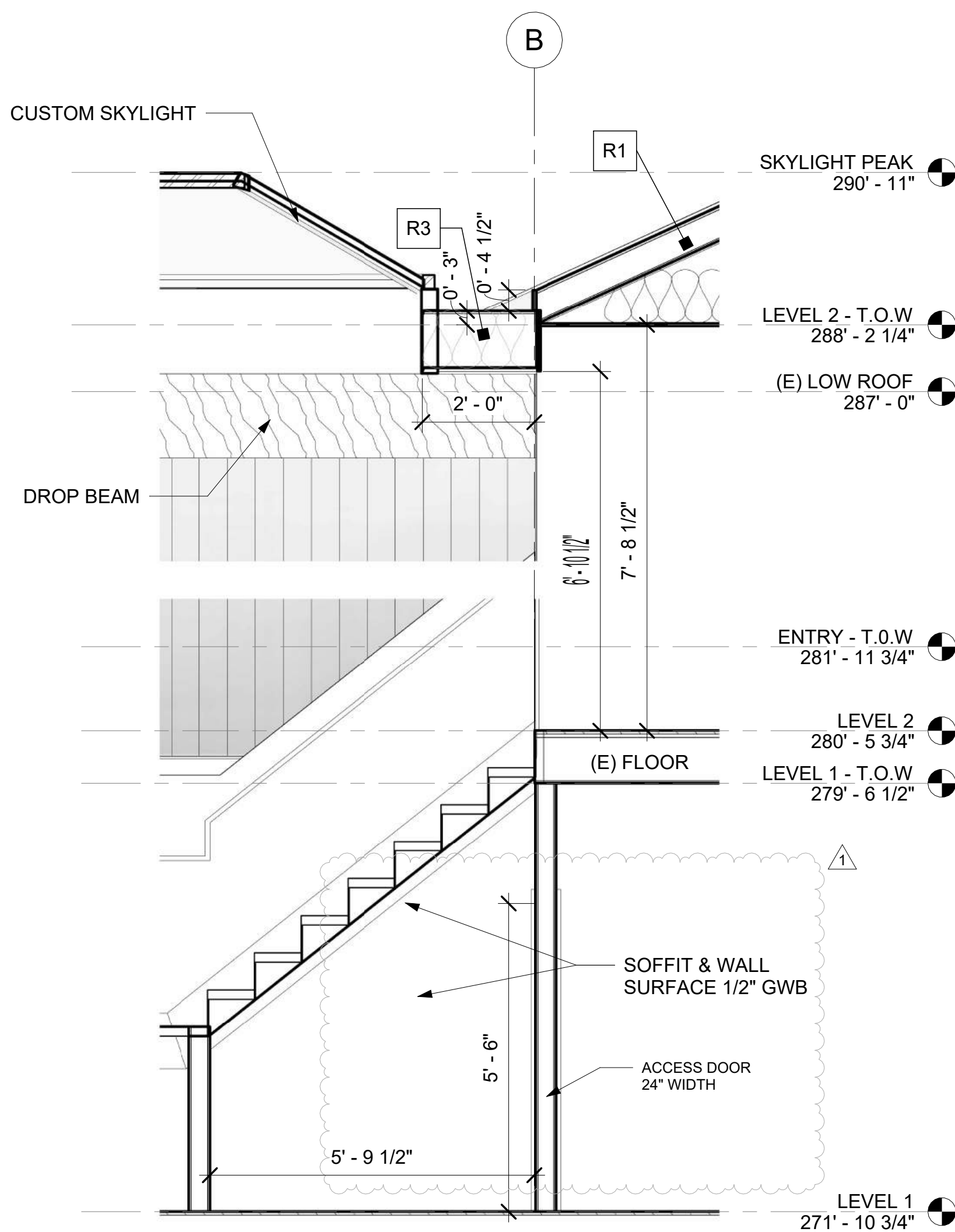
Scale: As indicated



① (E) TYP. EXT 2-STORY WALL  
1/2" = 1'-0"



② NEW 2 X 6 WALL @ MAIN LEVEL  
1/2" = 1'-0"



③ NEW ROOF & (E) ROOF INTERSECTION  
1/2" = 1'-0"

| WALL ASSEMBLIES |        |                                                                                                                                                                       |
|-----------------|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE            | RATING | ASSEMBLY                                                                                                                                                              |
| W1 - (E)        | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING<br>-2X4 @ 16" O.C.<br>-BATT INSULATION, 1/2" GWB                                                                      |
| W2 - (E)        | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING<br>-2X4 @ 16" O.C., 8" CONCRETE RETAINING WALL<br>-BATT INSULATION, 1/2" GWB                                          |
| W3              | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING PER STRUCT.<br>-2X6 @ 16" O.C.<br>-BATT INSULATION R-21 INT, 1/2" GWB                                                 |
| W4              | 0-HR   | -CEDAR 4.5" HORIZ. SIDING, WRB LAYER, SHEATHING PER STRUCT.<br>-2X6 @ 16" O.C., 6" CONCRETE RETAINING WALL<br>-BATT INSULATION R-21 INT + R-5 THERMAL BREAK, 1/2" GWB |

| ROOF ASSEMBLIES |        |                                                                                                                                                        |
|-----------------|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| TYPE            | RATING | ASSEMBLY                                                                                                                                               |
| R1 - (E)        | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING<br>-SITE-CUT TRUSSES<br>-BATT INSULATION, 1/2" GWB CEILING                                                  |
| R2              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER SRUCT.<br>-2 X 12 RAFTERS PER SRUCT.<br>-10-1/4" HIGH PERFORM. BATT INSULATION R-38, 1/2" GWB CEILING   |
| R3              | 0-HR   | -TPO, ICE AND WATER BARRIER, SHEATHING PER SRUCT.<br>-2 X 12 RAFTERS PER STRUCT.<br>-10-1/4" HP BATT INSULATION R-38, 1/2" GWB CEILING                 |
| R4              | 0-HR   | -ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING PER STRUCT.<br>-PREFABRICATED TRUSSES OR RAFTERS PER STRUCT.<br>-BATT INSULATION MIN R-49, 1/2" GWB CEILING |

**TYP VENTED ROOF ASSEMBLY:**  
- ROOFING PER ROOF ASSEMBLY TYPE  
- 30 LB BUILDING PAPER  
- SHEATHING PER STRUCTURAL  
- TRUSSES PER STRUCTURAL  
- MIN 1" VENT SPACE (2" IF POSSIBLE),  
  BAFFLES WHERE NEEDED  
- R49 BATT OR CELLULOSE INSULATION  
- KRAFT FACE CLASS 2 VAPOR RETARDER  
- 1/2" GWB

**TYP UNVENTED ROOF ASSEMBLY:**  
-ROOFING PER ROOF ASSEMBLY TYPE  
-30 LB BUILDING PAPER  
-SHEATHING PER STRUCTURAL  
-RAFTERS PER STRUCTURAL  
-R38 INSULATION/ CLASS II VAPOR RETARDER  
APPLIED DIRECTLY TO UNDERSIDE OF  
STRUCTURAL SHEATHING  
-1/2" GWB W/ CLASS 3 PVA PRIMER

## BUILD STUFF

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206-771-5014  
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| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 1              | 5/22/2024 | Revision 1           |  |

**HERNANDEZ RESIDENCE**  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #: 2402-026

Date: 09/19/24

## SECTION DETAILS

A304

Scale: 1/2" = 1'-0"

CRITICAL AREA LEGEND

|  |                          |
|--|--------------------------|
|  | EROSION                  |
|  | POTENTIAL SLIDE          |
|  | EXISTING FOOTPRINT       |
|  | ADDITION FOOTPRINT       |
|  | EXCAVATION FOOTPRINT >3' |
|  | ROCKERY < 4'             |
|  | GRAVEL / DRAIN ROCK      |
|  | NEW PLANTING AREA        |

JOINTS IN GEOTEXTILE FABRIC SHALL BE SPLICED AT POSTS. USE STAPLES, WIRE RINGS OR EQUIVALENT TO ATTACH FABRIC TO POSTS.

2"x2" BY 14 GA. WIRE OR EQUIVALENT, IF STANDARD STRENGTH FABRIC USED

Minimum 4"x4" trench

Post spacing may be increased to 8' if wire backing is used

2"x2" wood posts, steel fence posts, or equivalent

6' max

2"x2" BY 14 GA. WIRE OR EQUIVALENT, IF STANDARD STRENGTH FABRIC USED

Geotextile fabric

2' min

Backfill trench with native soil or 3/4" - 1.5" washed gravel

Minimum 4"x4" trench

2"x2" wood posts, steel fence posts, or equivalent

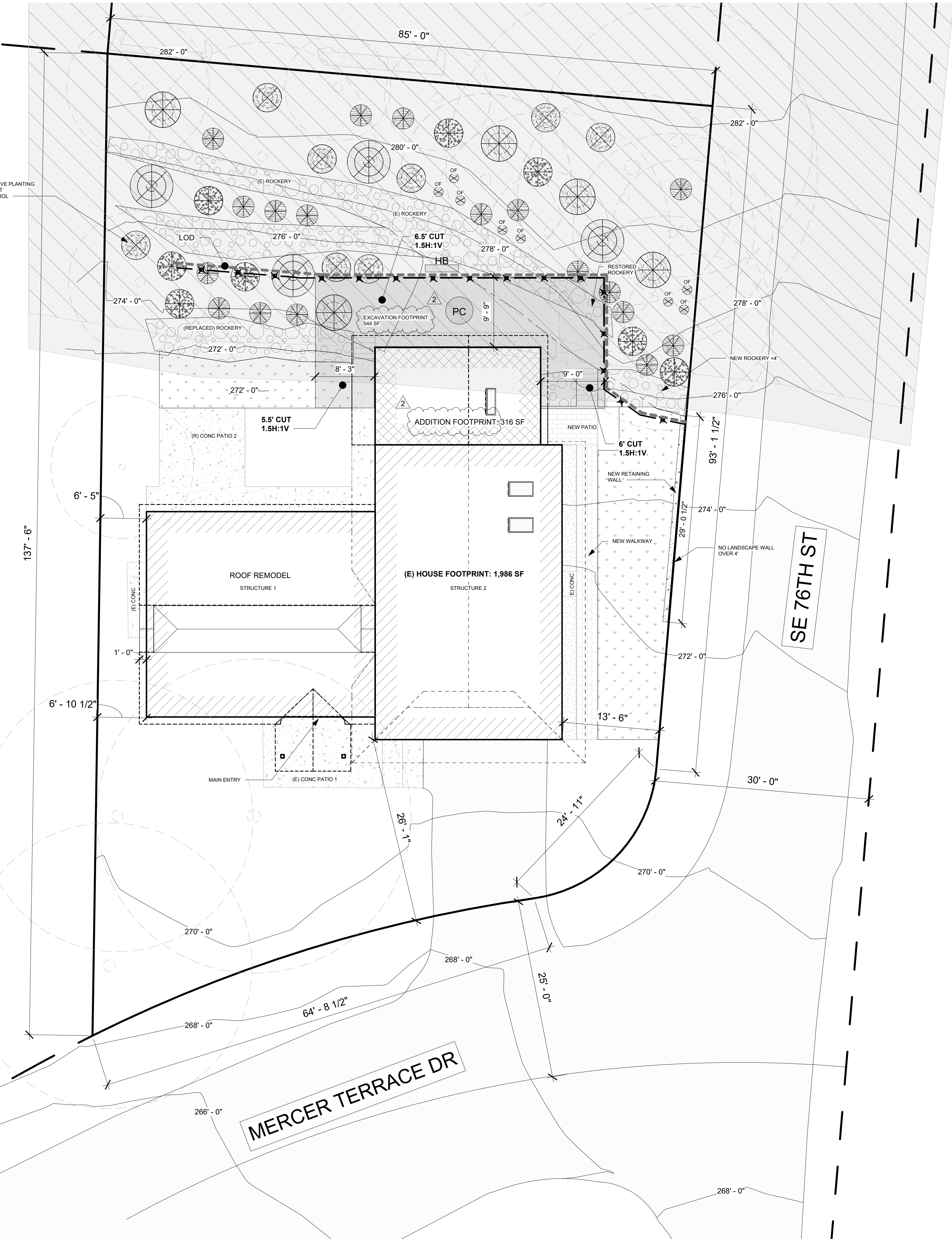
12' min

NOT TO SCALE

Silt Fence

Revised June 2016

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PLAN NOTES:

- TEMPORARY EROSION CONTROL AND GEO HAZARD MITIGATION STRATEGIES PER GEOTECH REPORT DATE 08/22/2023
- TYPICAL TEMPORARY EROSION CONTROL MEASURES TO BE IN PLACE DURING CONSTRUCTION AND ALL AREAS ARE RESURFACED WITH MULCHES/BARK/COMPOST AND PLANTINGS OR OTHER LANDSCAPING TO REDUCE THE RISK OF THESE HAZARDS.
- TREES, SHRUBS AND OTHER VEGETATION TO BE REMOVED PRIOR TO STRIPPING OF SURFICIAL ORGANIC-RICH SOIL AND FILL. BASED ON OBSERVATIONS FROM THE SITE INVESTIGATION PROGRAM, IT IS ANTICIPATED THAT THE STRIPPING DEPTH WILL BE 6 TO 18 INCHES. DEEPER EXCAVATIONS WILL BE NECESSARY IN AREAS OF LOOSE SOILS AND FILL, IF AND WHERE PRESENT.
- SOME OF THESE SOILS MAY ONLY BE SUITABLE FOR USE AS FILL DURING THE SUMMER MONTHS, AS THEY WILL BE ABOVE THE OPTIMUM MOISTURE LEVELS IN THEIR CURRENT STATE.
- TEMPORARY EXCAVATIONS DEEPER THAN 3 FEET SHOULD BE SLOPED NO STEEPER THAN 1.5H:1V (HORIZONTAL:VERTICAL) IN LOOSE NATIVE SOILS AND FILL AND 1H:1V IN MEDIUM DENSE NATIVE SOILS. IF AN EXCAVATION IS SUBJECT TO HEAVY VIBRATION OR SURCHARGE LOADS, WE RECOMMEND THAT THE EXCAVATIONS BE SLOPED NO STEEPER THAN 2H:1V, WHERE ROOM PERMIT
- TEMPORARY CUTS SHOULD BE IN ACCORDANCE WITH THE WASHINGTON ADMINISTRATIVE CODE (WAC) PART N, EXCAVATION, TRENCHING, AND SHORING.
- ADDITIONAL PERIMETER EROSION AND SEDIMENT CONTROL FEATURES MAY BE REQUIRED TO REDUCE THE POSSIBILITY OF SEDIMENT ENTERING THE SURFACE WATER. THIS MAY INCLUDE ADDITIONAL SILT FENCES, SILT FENCES WITH A HIGHER APPARENT OPENING SIZE (AOS), CONSTRUCTION OF A BERM, OR OTHER FILTRATION SYSTEMS
- ANY RUNOFF GENERATED BY DEWATERING DISCHARGE SHOULD BE TREATED THROUGH CONSTRUCTION OF A SEDIMENT TRAP IF THERE IS SUFFICIENT SPACE. IF SPACE IS LIMITED OTHER FILTRATION METHODS WILL NEED TO BE INCORPORATED.

EROSION CONTROL LEGEND:

|  |                                       |
|--|---------------------------------------|
|  | LIMIT OF DISTURBANCE (LOD)            |
|  | TREE PROTECTION FENCING W/ SILT FENCE |
|  | USE AS NEEDED HAY BALES               |
|  | USE AS NEEDED PLASTIC COVERING        |
|  | USE AS NEEDED TEMPORARY BERN          |

PLANT SYMBOLS:

|  | SPECIES NAME:              | QUANTITY: | SPACING: |
|--|----------------------------|-----------|----------|
|  | WESTERN OAK FERN (16")     | (8)       | AS SHOWN |
|  | WESTERN SWORD-FERN (3')    | (18)      | AS SHOWN |
|  | LADY FERN (5')             | (5)       | AS SHOWN |
|  | EVERGREEN HUCKLEBERRY (4') | (8)       | AS SHOWN |
|  | SALAL (4')                 | (8)       | AS SHOWN |
|  | THIMBLEBERRY (6')          | (4)       | AS SHOWN |

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diego@buildstuffstudios.com

| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

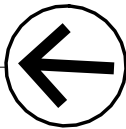
Record #: 2402-026

Date: 09/19/24

CRITICAL AREA &  
EROSION CONTROL

L101

Scale: As indicated



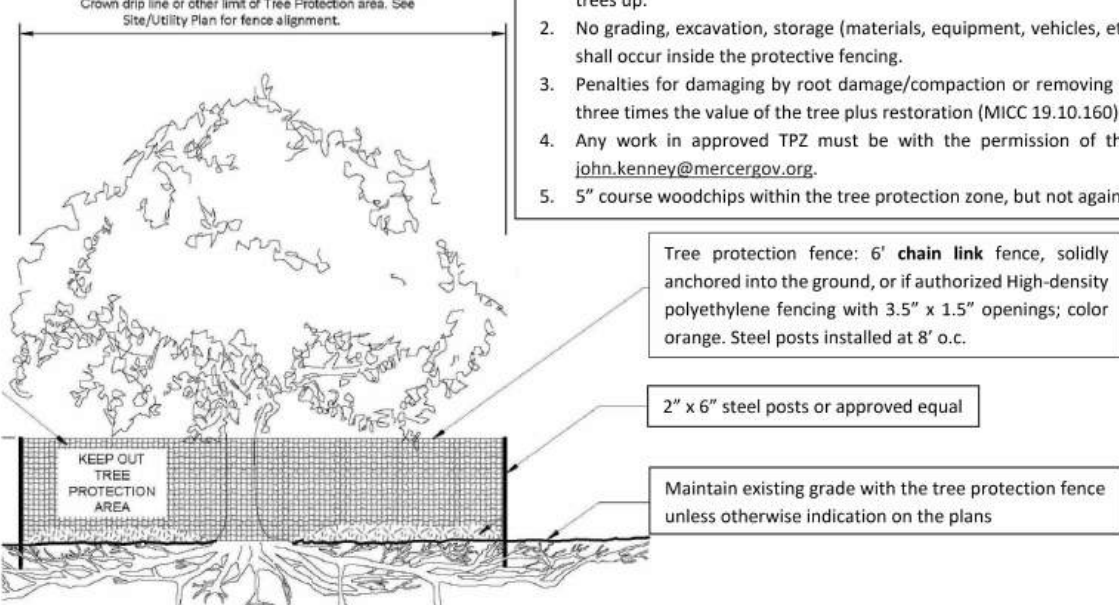
TREE PROTECTION AREA (TPZ)

KEEP OUT!

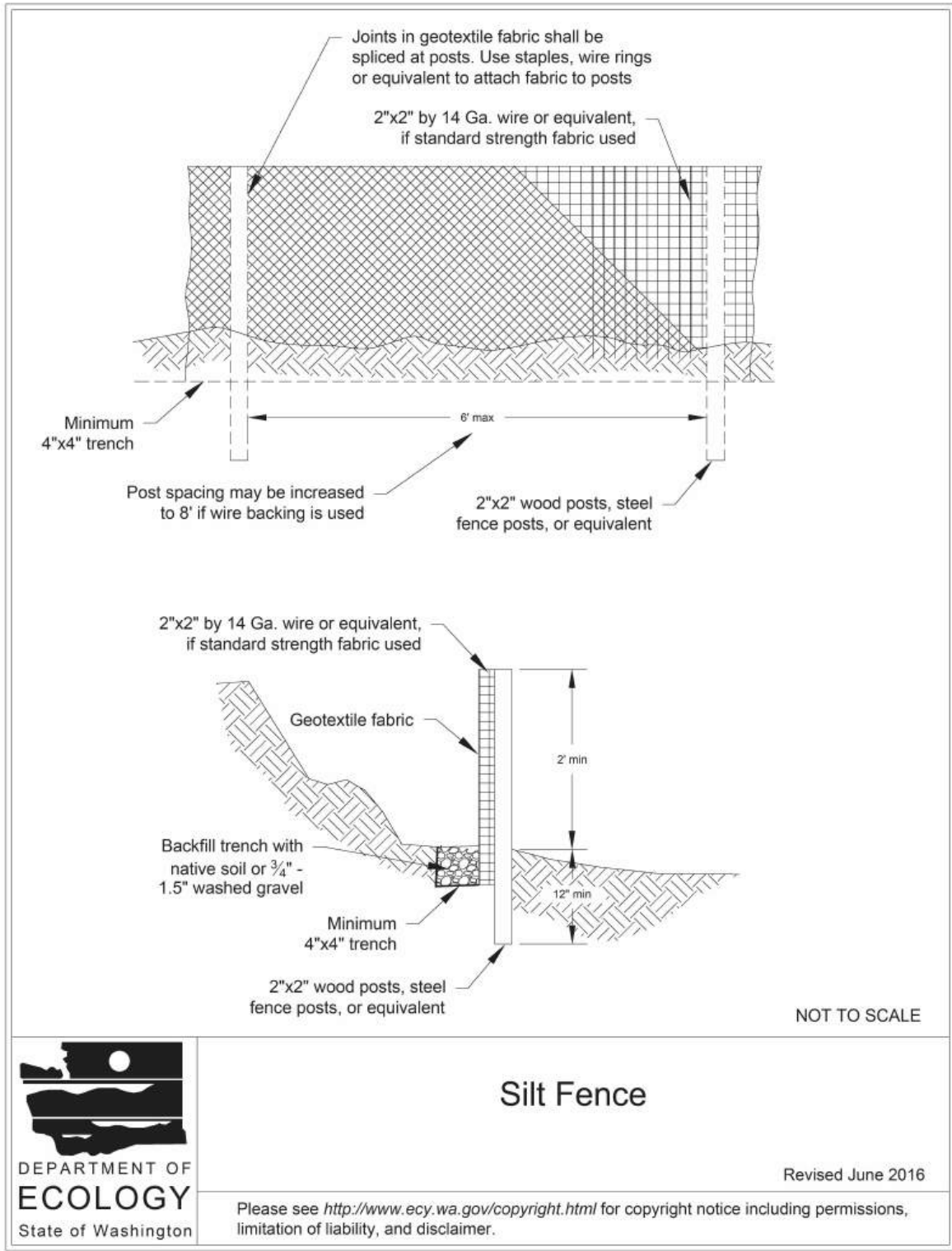
DO NOT REMOVE OR ADJUST THE APPROVED LOCATION OF THIS TREE PROTECTION AREA

Trees enclosed by this fence are protected and are subject to the conditions of the tree permit. Violation of tree conditions may lead to:

- Correction Notices or Stop Work Orders until compliance is achieved
- RE Inspection Fees/financial penalties
- Arborist reports recommending mitigation



Any Work in the protected area must be with the permission of the City Arborist [john.kenny@mercergov.org](mailto:john.kenny@mercergov.org)



PLAN NOTES:

- TREE RETENTION PLAN PER ARBORIST REPORT DATED 11/10/2023 REFER TO REPORT FOR INFORMATION ON TREE PROTECTION PLAN AND SPECIFICATIONS. OUTLINE OF TREES SHOWN IN PLAN REPRESENTS RECOMMENDED LIMIT OF DISTURBANCE SHOWN ON TREE INVENTORY TABLE PROVIDED IN ARBORIST REPORT. INTERIOR CRITICAL ROOT ZONE DRAWN FOR TREES TO BE RETAINED AND MONITORED DURING CONSTRUCTION.
- PER GEOTECH REPORT DATED 08/22/23 - TEMPORARY EXCAVATIONS DEEPER THAN 3 FEET SHOULD BE SLOPED NO STEEPER THAN 1.5H:1V (HORIZONTAL:VERTICAL) IN LOOSE NATIVE SOILS AND FILL AND 1H:1V IN MEDIUM DENSE NATIVE SOILS. IF AN EXCAVATION IS SUBJECT TO HEAVY VIBRATION OR SURCHARGE LOADS, WE RECOMMEND THAT THE EXCAVATIONS BE SLOPED NO STEEPER THAN 2H:1V, WHERE ROOM PERMIT
- TEMPORARY CUTS SHOULD BE IN ACCORDANCE WITH THE WASHINGTON ADMINISTRATIVE CODE (WAC) PART N.
- EXCAVATION CUT DEPTHS ARE BASED ON ELEVATION POINTS SHOWN IN THE ABE DIAGRAM ON SHEET A100.1 AND DEPTH TO THE BOTTOM OF FOUNDATION FOOTINGS PER STRUCTURAL PLANS.

Client: McIntyre

Assignment: Tree Protection Plan

TABLE OF TREES

7520 Mercer Terrace Drive

Inventory Date: 10/11/2023

Report Date: 11/10/2023

| Tree Tag | Common Name      | Botanical Name                           | DSH* | Dripline** | Health | Recommended Limits of Disturbance (RLOD) (feet)                  |
|----------|------------------|------------------------------------------|------|------------|--------|------------------------------------------------------------------|
| 1        | Sawara cypress   | <i>Chamaecyparis pisifera</i> 'Filifera' | 13   | 13         | Good   | tree within footprint of addition, <b>REMOVE</b>                 |
| 2        | Douglas-fir      | <i>Pseudotsuga menziesii</i>             | 20   | 20         | Good   | encroachment into CRZ exceeds allowable threshold, <b>REMOVE</b> |
| 3        | Western reccedar | <i>Thuja plicata</i>                     | 9    | 6          | Poor   | encroachment into CRZ exceeds allowable threshold, <b>REMOVE</b> |
| 4        | Bigleaf maple    | <i>Acer macrophyllum</i>                 | 9    | 18         | Fair   | 18 on sides N, E, and S; 7 on W side                             |
| 5        | English hawthorn | <i>Crataegus laevigata</i>               | 9.5  | 13         | Good   | 10                                                               |
| 6        | Western reccedar | <i>Thuja plicata</i>                     | 16   | 9          | Good   | 14                                                               |
| 7        | Bigleaf maple    | <i>Acer macrophyllum</i>                 | 16   | 10         | Fair   | 10                                                               |
| 8        | Western reccedar | <i>Thuja plicata</i>                     | 15   | 8          | Good   | 15                                                               |
| 9        | Bigleaf maple    | <i>Acer macrophyllum</i>                 | 26   | 15         | Fair   | 26                                                               |
| 10       | Western reccedar | <i>Thuja plicata</i>                     | 19   | 6          | Good   | 19                                                               |
| 11       | Douglas-fir      | <i>Pseudotsuga menziesii</i>             | 17   | 20         | Good   | 20 on sides E, S and W; 8 on NW side                             |
| 12       | Douglas-fir      | <i>Pseudotsuga menziesii</i>             | 18   | 12         | Good   | 12                                                               |
| 13       | Noble fir        | <i>Abies procera</i>                     | 16   | 12         | Good   | 16                                                               |
| 14       | Sawara cypress   | <i>Chamaecyparis pisifera</i> 'Filifera' | 10   | 8          | Good   | 10                                                               |
| 15       | Blue Atlas Cedar | <i>Cedrus atlantica</i> 'Glauca'         | 22   | 25         | Good   | 22                                                               |
| 16       | Austrian pine    | <i>Pinus nigra</i>                       | 19   | 14         | Good   | 19                                                               |
| 17       | Deodar cedar     | <i>Cedrus deodara</i>                    | 20   | 18         | Good   | 20                                                               |

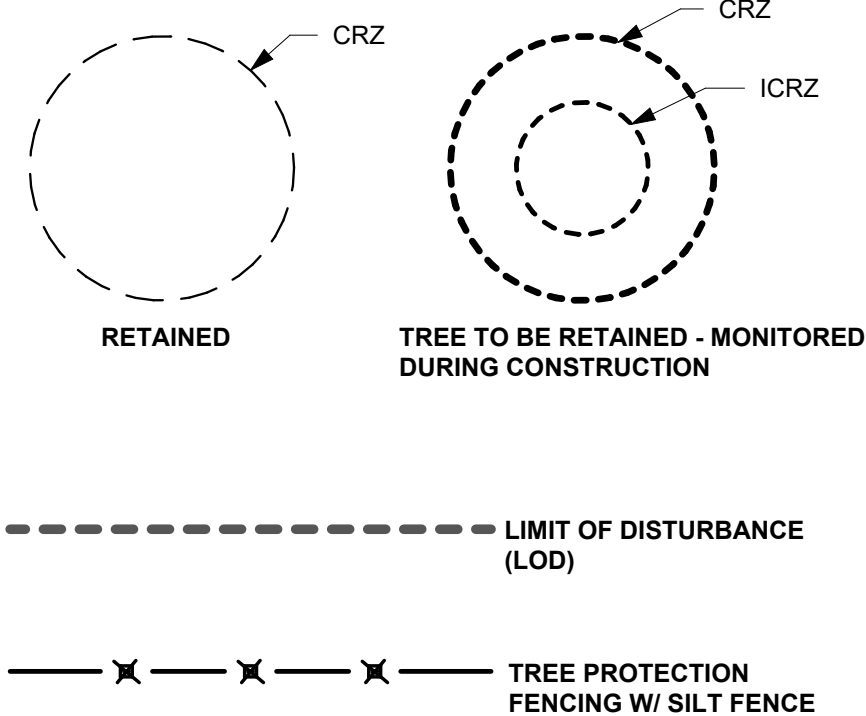
\*DSH is Diameter at Standard Height (inches)

\*\*Dripline was measured from the center of the trunk to the outermost limits of the canopy on the side of construction (feet).

TREE TRUNK SYMBOLS

- #15 EXISTING TREE TO BE RETAINED <24"
- #9 EXISTING TREE TO BE RETAINED >24"
- #2 EXISTING TREE TO BE REMOVED

TREE OUTLINE SYMBOLS



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206-771-5014  
[diego@buildstuffstudios.com](mailto:diego@buildstuffstudios.com)

| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

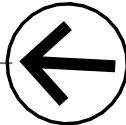
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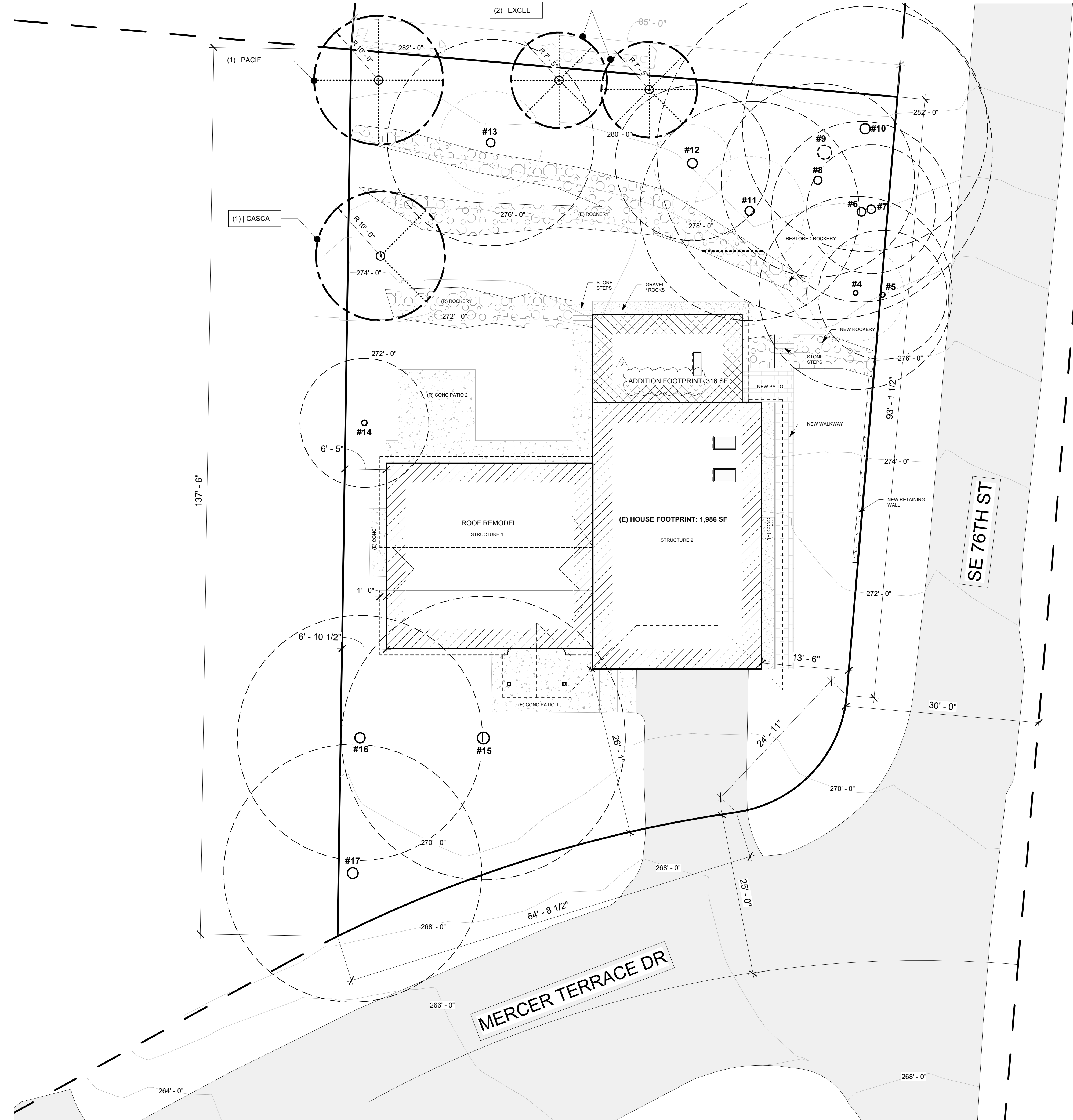
Date: 09/19/24

TREE RETENTION &  
SITE DEMO PLAN

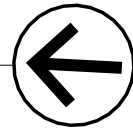
L102

Scale: 1/8" = 1'-0"





1 TREE REPLACEMENT PLAN  
1/8" = 1'-0"



PLAN NOTES:

- TREE RETENTION PLAN PER ARBORIST REPORT DATED 11/10/2023 REFER TO REPORT FOR INFORMATION ON TREE PROTECTION PLAN AND SPECIFICATIONS. OUTLINE OF TREES SHOWN IN PLAN REPRESENTS RECOMMENDED LIMIT OF DISTURBANCE SHOWN ON TREE INVENTORY TABLE PROVIDED IN ARBORIST REPORT. INTERIOR CRITICAL ROOT ZONE DRAWN FOR TREES TO BE RETAINED AND MONITORED DURING CONSTRUCTION.
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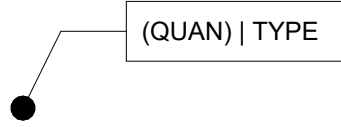
NEW TREES: SPECIES TABLE

| QUAN. | SYMBOL | SPECIES NAME                     | MATURE SPREAD |
|-------|--------|----------------------------------|---------------|
| 1     | PACIF  | PACIFIC YEW,<br>TAXUS BREVIFOLIA | 20 FEET       |
| 2     | EXCEL  | EXCELSA WESTERN<br>RED CEDAR     | 15 FEET       |
| 1     | CASCA  | CASCARA<br>RHAMNUS PURSHIANA     | 20 FEET       |

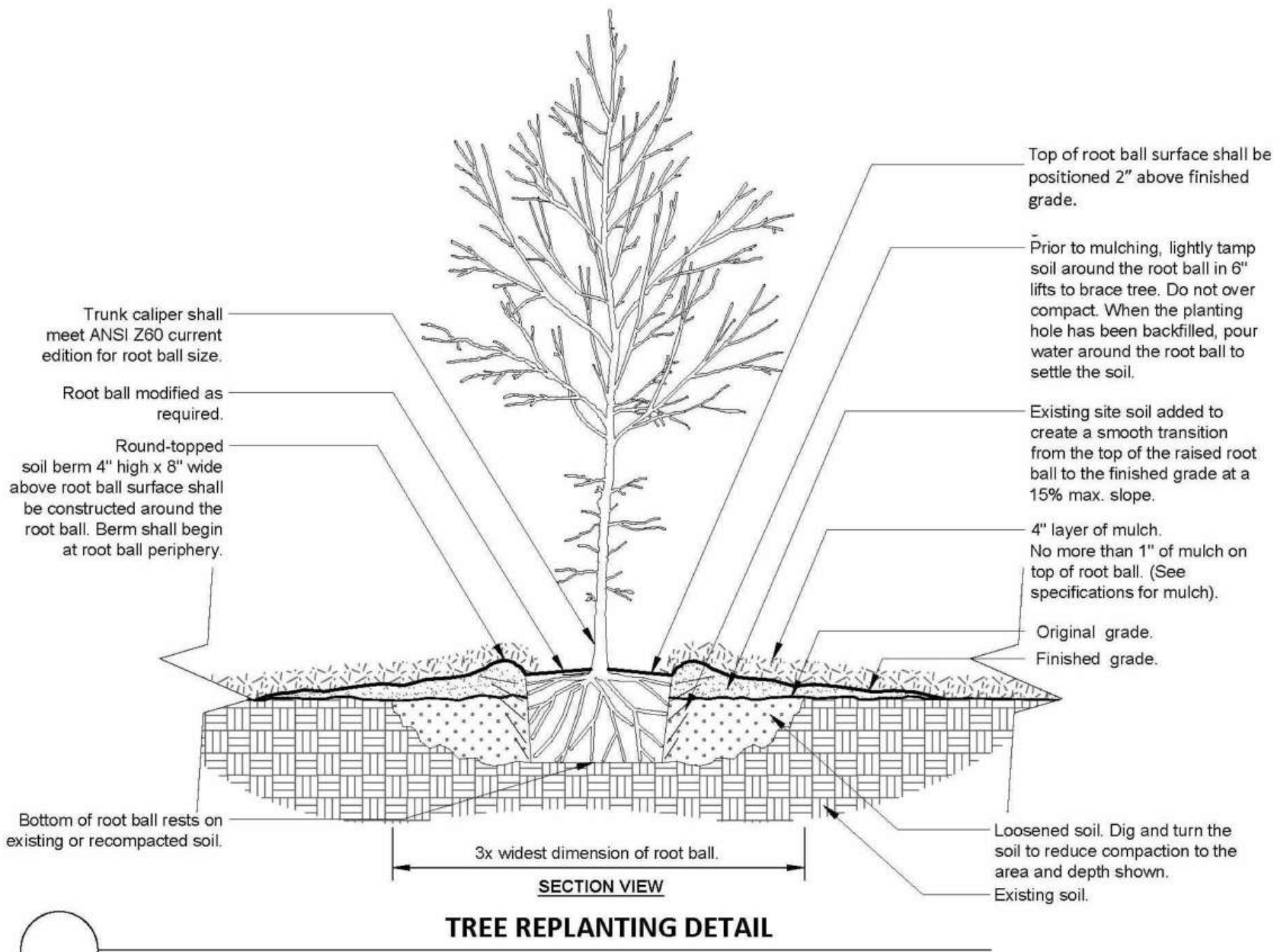
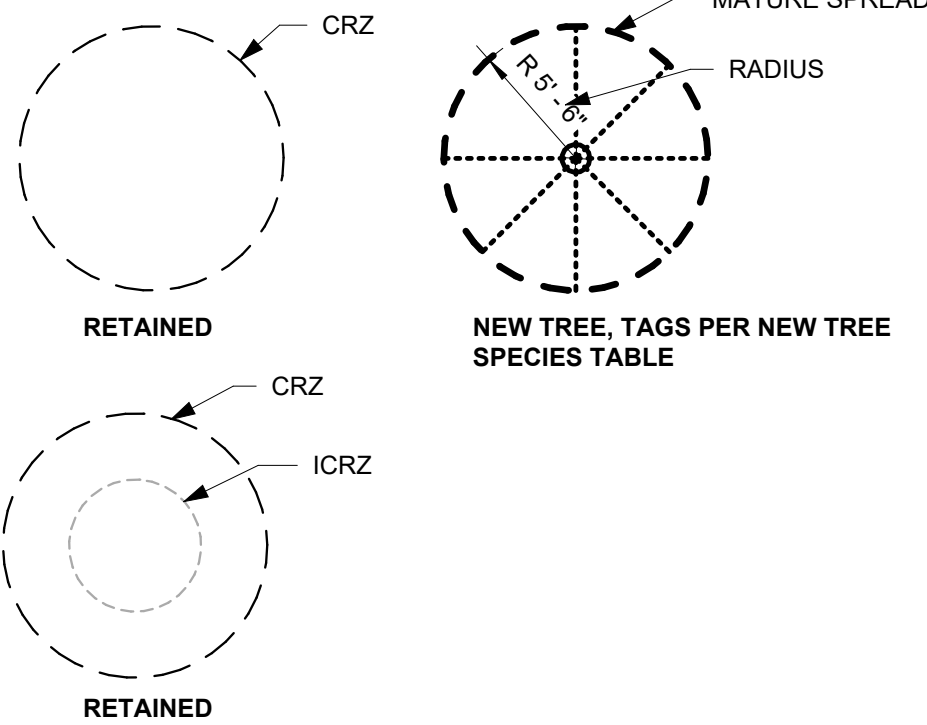
TREE TRUNK SYMBOLS:

- #15  EXISTING TREE TO BE RETAINED <24"
- #9  EXISTING TREE TO BE RETAINED >24"

TREE TAG SYMBOLS



TREE OUTLINE SYMBOLS:



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206-771-5014  
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| REVISION TABLE |           |                      |  |
|----------------|-----------|----------------------|--|
| Revision #     | Date      | Revision Description |  |
| 2              | 9/19/2024 | Revision 2           |  |
|                |           |                      |  |
|                |           |                      |  |
|                |           |                      |  |

HERNANDEZ RESIDENCE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

Project Status:

PERMIT DRAWINGS SET

Project Owner:

RODOLFO HERNANDEZ &  
SHANNON MCINTYRE

Record #:

2402-026

Date:

09/19/24

TREE REPLACEMENT  
PLAN

L103

Scale:

1/8" = 1'-0"

Structural Notes:

Applicable Codes and Standards:

2018 International Building Code (IBC) and other applicable local building codes.  
ASCE/SEI 7-16 - “Minimum Design Loads for Buildings and Other Structures”  
2018 NDS for wood structures.  
American Wood Preservers Bureau - AWPB Standards for Pressure Treated Material.  
American Concrete Institute - ACI 315, ACI 318, ACI 301, ACI 307.

Structural design shall be in accordance with the latest edition of above codes and standards. Contractor shall comply with the latest edition of all applicable codes and standards.

Special Inspections:

Special Inspections are required for:  
Epoxy Grouted Anchor Bolt Installation

Design Loads:

|            |                                                                          |                                          |
|------------|--------------------------------------------------------------------------|------------------------------------------|
| Live load: | roof                                                                     | 25 psf (snow)                            |
|            | floors                                                                   | 40 psf                                   |
| Dead load: | as required                                                              | 15 psf                                   |
| Wind load: | Basic wind speed                                                         | 110 mph, exposure C, Kz/T=1.6            |
|            | Building Category:                                                       | Enclosed, Wind Important Factor Iw = 1.0 |
|            | Refer to calculation page L1 for design wind forces.                     |                                          |
|            | Internal pressure 5 psf, Components and cladding design per 1609.6.4.4.1 |                                          |

Seismic loading per IBC Section 1613, Site Class D.  
The basic structural type is a bearing wall system with light framed walls with shear panels. Rw = 6.5 (wood structural panels), soil type D.  
Seismic importance factor 1.0, Seismic Use Group I  
Design and Analysis by Simplified Design Procedure  
Peak Ground Accelerations (PGA) based on USGS Hazards Program, by lat/long.  
PGA 1 sec = .508      PGA .2 sec = 1.472  
Seismic base shear = 0.181 \* Dead Load

Foundations:

Soil parameters per the geotechnical report prepared by Cobaly Geosciences, dated August 22, 2023.

The subgrade should be prepared as follows, unless otherwise noted by the geotechnical report:

All soil conditions are to be field verified during construction. Footings shall bear on firm natural soils or on structural fill placed over firm natural soils, and inspected in place. Footings shall extend 18 inches minimum below adjacent exterior finished grade and shall extend 12 inches minimum below existing interior grade unless otherwise noted on plans. Structural fill shall be placed in 12-inch maximum horizontal lifts (loose thickness) and compacted to 95 percent of maximum dry density in accordance with ASTM D-1557. Imported structural fill shall be granular material containing no more than 5 percent fines, passing no. 200 sieve. Structural fill in place shall be tested by a licensed soil engineer or approved by the building inspector.

Drainage behind the concrete walls shall be provided conforming to the construction details.

Cast in Place Concrete:

Concrete shall attain a minimum compressive strength of 2,500 psi at 28 days (5-½ sack mix). An alternate mix provided by the concrete supplier and pre-approved by the building department is acceptable.

Reinforcing steel shall conform to ASTM A-615, Grade 60 (Fy=60,000 psi) for all bars. Provide all wall and footing horizontal bars with 2'-0" x 2'-0" corner bars of the same size at all corners and wall intersections. Minimum lap splice 48 bar diameters.

|                                                 |                                      |
|-------------------------------------------------|--------------------------------------|
| Concrete protection for reinforcement shall be: |                                      |
| Concrete exposed to earth or weather            | 1.5" (#5 & smaller) 2" (#6 & larger) |
| Concrete cast against earth                     | 3"                                   |
| Slabs                                           | 0.75"                                |

Bolts:

Anchor bolts shall conform to F1554. All other bolts shall conform to ASTM A307.  
Minimum anchor bolt size and spacing shall be ½" diameter bolts @ 6' o.c. Shear wall anchor bolts per the shear wall schedule.  
For cast-in-place anchors, provide 7" minimum embedment into the new concrete foundation.  
For retrofitted anchors, provide 5" minimum embedment into the existing concrete foundation. Epoxy grout with Simpson SET epoxy.  
Provide 3"x3" square x 0.229" thick bolt washers where anchor bolts connect the sill plate to the concrete foundation.

Wood Framing Specifications:

All sill plates and other wood framing which is in contact with concrete or masonry must be preservative-treated in accordance with AWPA U1 and M4 standards. For anchor bolts connecting wood sill plates to concrete or masonry, provide galvanized steel washers and nuts on top of the sill, minimum washer size 3" x 3" x 1/4" thick.

Where toenails are used for stud wall construction, a minimum of (2) toenails at top and bottom of each stud shall be provided. Toenails shall be 16d nails driven at approximately a 45 degree angle, with a minimum of 1-1/2" of the nail shank shall be embedded in both the stud and the plate. End nails driven through the plate and into the stud end grain are not permitted. Simpson A34 clips at top and bottom of each stud are permitted where correct toenailing is not provided.

Wherever joists bear on a wall or beam, either a continuous rim joist or solid wood blocking must be provided. Blocking shall be connected to the joists with A35 angles at each end. Individual blocks may be omitted to allow for ducting or other openings. Consult with the engineer of record if more than 25% of the blocking is omitted.

Where a post aligns with a header on the floor below, provide full depth blocking through the floor framing and a full sized post above the header in the wall below  
Unless noted otherwise, the following grades and species shall be used for structural lumber:

|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| 2x joists            | Hem-Fir #2                                                |
| 2x, 3x, and 4x studs | DF/L standard for plywood or WSP shear walls              |
|                      | Hem-Fir standard for other walls                          |
| 4x and 6x beams      | DF-L #2                                                   |
| Glu-lam lumber       | 24F-V4 for simple span beams, 24F-V8 for cantilever beams |

All framing connections shall be per Table 2304.10.1 of the IBC, unless otherwise noted.

Preservative-Treated Wood and Fasteners:

All wood in contact with concrete or masonry shall be preservative-treated, in accordance with AWPA U1 and M4 standards.

All fasteners installed in preservative-treated wood shall be hotdipped zinc-coated galvanized with a minimum coating weight complying with ASTM A 153.

Fasteners other than nails and timber rivets are permitted to be mechanically deposited zinc-coated with coating weights complying with ASTM B 695, Class 55 minimum. Plain carbon steel fasteners in wood preservative-treated with SBX/DO1 or zinc borate are not required to be galvanized.

Plywood Thickness, Grade, and Nailing:

Install plywood sheets with face grain perpendicular to framing. Stagger joints in adjacent sheets. If not otherwise noted, use nailing schedule, Table 2304.6.1 of the IBC.

Manufactured Trusses:

Manufactured trusses specified on the plans are prefabricated products manufactured by a truss manufacturer. The contractor shall submit shop drawings and stamped structural design calculations for review. The manufacturer's installation instructions shall be available on the job site at the time of inspection. Truss design and shop drawings shall include location and weight of all equipment being supported by these trusses.

The truss live loading shall be per IRC Section 301.5 and Table 301.5, especially noting footnotes b and g.

The truss design shall be per IRC Sections 502.11.1 and 802.10.2, especially indicating the truss design and manufacturing shall be per ANSI/TPI 1.

The truss temporary and permanent bracing shall be per IRC Sections 502.11.2 and 802.10.3 as well as the Truss Plate Institute's Building Component Safety Information.

Truss alterations shall not occur unless the approval of a design professional as indicated in IRC Sections 502.11.3 and 802.10.4.

Metal Framing Connectors:

Unless otherwise noted: Metal framing connectors shall be manufactured by the Simpson company, or approved equal. Unless noted otherwise, use U-series joist hangers to match joist size (e.g., U210 for 2x10 joist). Provide H1 or H2.5 hurricane ties, or other connectors with similar capacity, at every roof joist or truss, and H6 or H7 at ends of roof beams and girder trusses. Where supported by wood posts, wood beams shall be connected to the tops of the posts using Simpson AC, PCZ or EPCZ post caps, and to the bottoms of the posts bearing on wood framing using Simpson AC connectors or A35 clips. Where supported by perpendicular beams, wood beams shall be connected by HU-series face mount beam hangers. Provide Simpson AB or PB post bases to connect posts to concrete foundations. Unless otherwise specified, the maximum number of nails or screws should always be installed on any connector.

Bearing Walls:

All walls supported by continuous concrete footings shall be connected to the foundation per 2018 IRC section 403.1.6. 1/2" diameter anchor bolts shall be provided at 4' o.c., or two per wall segment, minimum. Anchor bolts shall penetrate 7" into the concrete foundation.

Connection of New Foundation to Existing, Note NF:

At each location where the new concrete foundation abuts the existing foundation, connect the new to the existing using minimum (3) #4 by 18" long rebar dowels, epoxy grouted into 5/8" diameter by 5" deep holes drilled into the existing foundation. Each dowel shall be no closer than 3" to any edge or corner

of concrete. Minimum spacing between dowels shall be 6". For concrete wall intersections longer than 3'-0" in any direction, additional dowels shall be located at 12" o.c. for the full height or length of the new foundation concrete.

Contact the engineer (prior to construction) for evaluation and approval of the existing foundation system, if there are any significant cracks in the existing foundation within 6 feet of the new foundation, or if there is any indication that the existing foundation is in poor condition, including visible rock pockets, non-uniform concrete, spalling, noticeable settlement of the existing footing, or other distress.

Roof Over Framing Note, Note OF:

The new roof area shown in dashed lines consists of new roof framing constructed over the existing roof framing below. The over built framing shall be constructed in such a way to distribute the roof loads from the new framing uniformly to the existing roof structure (for example, no new concentrated loads, such as from a beam, shall be added to the existing roof structure). This equal distribution may be accomplished by constructing the new overbuild roof using framed 2x4 cripple walls spaced at 2 feet on center, located on top of and perpendicular to the existing roof sheathing supported by the existing roof framing. No sheathing is required for these cripple walls.

The new cripple walls and roof rafters (spanning 2 feet, perpendicular to the cripple walls) may be constructed using 2x4 lumber, stud grade at minimum. The new plates shall be nailed to each existing rafter with (2) 16d nails minimum. New roof sheathing shall be per the diaphragm schedule.

A new 2x plate shall be constructed along the new valley lines, and nailed to each existing rafter, along its entire length, with (2) 16d nails per existing rafter.

If desired, an alternate method for distributing the loads may be submitted to the structural engineer of record, for review and approval prior to construction.

Hold Down Notes

Convention for showing shear walls and hold downs: Shear walls are shown on the framing plan for the floor above. (For example, first floor shear walls will be shown on the second floor framing plan, and the shear walls for the topmost floor will be shown on the roof framing plan.) Hold downs are located at the bottom of that shear wall, and connect the end of the shear wall to wall framing or a structural beam located in the floor below the shear wall. Contact the engineer of record for clarification if needed.

Hold downs for each floor must be continuously connected to hold downs on the floor below (or to other intermediate wood framing where so indicated), until they are finally connected to the concrete foundation.

Hold downs shall be installed so as to be as far apart as is reasonable. Hold downs may be located on either the near side or the far side of the post or double stud to which they are attached. In no case shall a hold down bolt be located farther than 6" from the end of the shear wall, except with prior written approval of the engineer. Refer to the latest edition of the Simpson Catalog for details.

Where multiple studs are called out at a hold down, nail studs together with (2) 16d nails at 8" o.c. or 1/4" x 3" Simpson SDS Screws at 12" o.c.

Where a hold down post lands on a rim joist, provide full depth vertically oriented blocking under the post.

Strap Hold Downs:

Provide a vertically oriented strap hold down consisting of one or two of the Simpson vertical strap ties listed below, connecting the end stud or post of the shear wall indicated to new or existing studs in the wall framing below, or to a wood beam supporting the shear wall, where applicable.  
Straps shall be installed so that the minimum end length is provided to both connected posts or studs. Where a strap is connected to a beam below, the strap shall be wrapped around the beam until the minimum end length is reached.

See Strap Hold Down Typical Detail.

CMSTC16 denotes a Simpson CMSTC16 strap, with a minim end length of 25", and (29) 16d sinker nails each end.

Rod Hold Downs:

HDUx denotes a Simpson HDU(2,4,5,8,or 11)-SDS2.5 hold down. For hold down bolts at existing concrete foundations, use the following bolts:

For HDU2.4.5: 5/8" diameter A307 threaded steel rod may be used, which shall be epoxy grouted into a 3/4" diameter hole with a minimum embedment of 10". See Retrofit HDU Typical Detail.

For hold downs at new concrete foundations, provide the following bolts.

For HDU2.4.5: Simpson SB5/8x24 may be used, installed per the most recent edition of the Simpson Strong-Tie Literature.  
5/8" diameter A307 threaded steel rod may be used, which shall be embedded 8" into the concrete foundation.

For HDU11: Simpson SB1x30 may be used, installed per the most recent edition of the Simpson Strong-Tie Literature.  
Where the hold down is too high off of the concrete foundation to adequately connect to the specified anchor, A 1" diameter threaded rod and ASTM A194-2H coupler connecting to the specified anchor may be used.

Special Note:

All holes for hold down bolts which are installed into existing foundations must be inspected during the installation of the hold down. Either the building inspector, the structural engineer of record, or the special inspection agency must perform the inspection and approve it before the bolts may be epoxy grouted into the holes. The epoxy grout used must be Simpson SET-XP unless otherwise noted by the engineer of record.

For drilled holes into existing concrete, no less than 2" must be provided between the edge of the hole and the face of concrete. The Engineer of Record or Special Inspector must witness the installation of hold down bolts, including cleaning the holes with compressed air and a wire brush before the anchor is installed. The hole shall be filled with enough epoxy that when the anchor is inserted, the epoxy rises to the top of the concrete. Care shall be taken that no air bubbles persist in the epoxy.

The contractor must verify that the existing foundation stem wall is uncracked and continuous, and is sound and in good condition, within 5 feet of any retrofitted shear wall or hold down, in any direction, except with prior written approval of the engineer. The existing concrete foundation stem wall shall be at least 6" thick and 2'-6" in height. The concrete shall be of good quality, hard and uniform, with appropriate aggregate type, size and distribution, and with no visible rock pockets or other similar deficiencies.

Any existing cracks located within 10' of any hold down must be completely filled with an appropriate epoxy based concrete repair product. The product to be used shall be approved in writing by the engineer prior to filling the cracks.

Contact the engineer of record prior to proceeding if any of these requirements are not met, or if the installation of the hold downs results in any visible damage to the existing foundation.

SHEAR WALL SCHEDULE

(Lumber for shear walls is HF#2 or better, unless otherwise noted.)

| Type | Material             | Edge Nailing | Field Nailing | A.B. Size/Spacing | Plate Nailing        | Plates | A35 Spacing | Shear Capacity |
|------|----------------------|--------------|---------------|-------------------|----------------------|--------|-------------|----------------|
| SW1  | 15/32" WSP one side  | 8d @ 6"      | 8d @ 12"      | 1/2"Ø @ 48"       | (2) 16d @ 9"         | 2x_    | 24"         | 230 plf        |
| SW2  | 15/32" WSP one side  | 8d @ 4"      | 8d @ 12"      | 1/2"Ø @ 32"       | (2) 16d @ 6"         | 2x_    | 16"         | 350 plf        |
| SW3  | 15/32" WSP one side  | 10d @ 3"     | 10d @ 12"     | 5/8"Ø @ 24"       | (2) 16d @ 4"         | 3x_    | 12"         | 550 plf        |
| SW3X | 15/32" WSP one side  | 10d @ 2"     | 10d @ 12"     | 5/8"Ø @ 24"       | 5/8"Ø x 8" Lag @ 24" | 3x_    | 9"          | 710 plf        |
| SW5  | 15/32" WSP two sides | 8d @ 3"      | 8d @ 12"      | 5/8"Ø @ 16"       | 5/8"Ø x 8" Lag @ 16" | 3x_    | 8"          | 910 plf        |

For shear wall callouts on the Structural Framing Plans: SW x (y') denotes a shear wall type "x" with a minimum length of "y" feet. See Exterior Shear Wall Typical Detail.

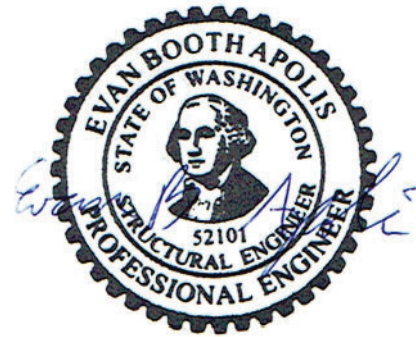
- For SW3 and greater, studs, plates, and blocking where two WSP panels abut shall have a minimum 3" nominal thickness. Double 2x\_ members may be used if the members are connected by plate nailing. Note 10d nails at WSP panel edges.
- "WSP" refers to "Wood Structural Panel", either plywood or other wood materials.
- Provide double stud minimum at both ends of all shear walls.
- Provide blocking at all panel edges to match the depth of framing, unless otherwise noted.
- At the roof or top level of any shear wall, "A35 spacing", and all other relevant connector specifications, apply to assemblies at both the top and bottom of the shear wall. At lower levels, apply to the bottom of the wall only.
- Provide floor diaphragm edge nailing per diaphragm schedule through floor plywood into blocking, parallel joist framing, or top plates (whichever applies) of all shear walls.
- Provide 3x\_ plates, and 4x\_ rim joists, minimum, where lag screws are specified for plate nailing.
- Where shear wall edge nails are spaced closer than 3" o.c., or spaced 3" o.c. with 10d nails, foundation sill plates and all framing members receiving edge nailing from abutting panels shall not be less than a single 3x\_ member.
- Provide 4x\_ or double 2x\_ framing where A35 angles are used on both sides of one piece of wood.
- Where a shear wall terminates above the foundation level (no shear wall below), provide minimum 4x\_ blocking or double joist framing (as applicable) below the shear wall."&" Plate nailing per this schedule shall be nailed into this blocking at the bottom of the shear wall.
- Shear wall nails shall be placed no closer than 3/8" from a panel edge or perpendicular face of stud.
- Maximum spacing between nails shall not exceed 12".
- Shear wall nailing shall be common or galvanized box nails, unless lag screws are noted. Galvanized nails shall be hot dipped or tumbled.
- Lag screw plate connectors shall penetrate 3.5" minimum, and plates or beams receiving lag screws shall have a minimum width of 3.5".
- Where hold downs are specified, the shear wall bolt shall be located within 6 inches of the end of the shear wall, unless otherwise approved by the engineer of record. Minimum end studs shall be as specified in the most recent Simpson catalog.
- Shear wall edge nailing through shear wall sheathing shall be provided into all studs attached to a hold down.
- Retrofit anchor bolts shall have a minimum embedment of 5" into the concrete foundation.
- Cast in place anchor bolts shall have a minimum embedment of 7" into the concrete foundation.
- For SW3 and greater, foundation anchor bolt plate washers shall extend to within 1/2" of the edge of the sheathing.
- Plate nails shall be nailed into a solid wood rim joist.
- 2x\_ plates may be substituted for 3x\_ plates if panels are nailed with edge nailing directly to the rim joist.
- Where 3x\_ plates are used, (2) 20d common nails must be used instead of (2) 16d common nails to connect studs to the bottom plate.
- For SW3 and greater at existing walls, Retrofit High Strength Shear Wall Typical Detail may be used.
- Where Roof ventilation is required over a shear wall, see roof ventilation detail.

Diaphragm Schedule

(Lumber for diaphragm construction is HF#2 or better, unless otherwise noted.)

| Type  | Material         | Edge Nailing | Field Nailing | Edge Blocking | Remarks          |
|-------|------------------|--------------|---------------|---------------|------------------|
| Roof  | 15/32" CDX 24/0  | 8d @ 6" o.c. | 8d @ 12" o.c. | no            | Minimum Standard |
| Floor | 23/32" CDX 48/24 | 8d @ 6" o.c. | 8d @ 12" o.c. | no            | Minimum Standard |

- "WSP" refers to "Wood Structural Panel", either plywood or other wood materials.
- Rim joists at exterior walls shall be continuous for tension. At rim joist splice locations, provide (2) CS16 horizontal straps, minimum 24"
- Where roof or floor framing is cantilevered over an exterior wall below, provide solid blocking with Diaphragm edge nailing between joists.
- This is the minimum required diaphragm construction. Where otherwise noted on the plans, additional blocking or nailing may be required.



Consulting Structural Engineering Services  
6311 17th Ave NE, Seattle, WA 98115  
Phone: 206-527-1288  
Email: john@cses-engineering.com

MACINTYRE  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

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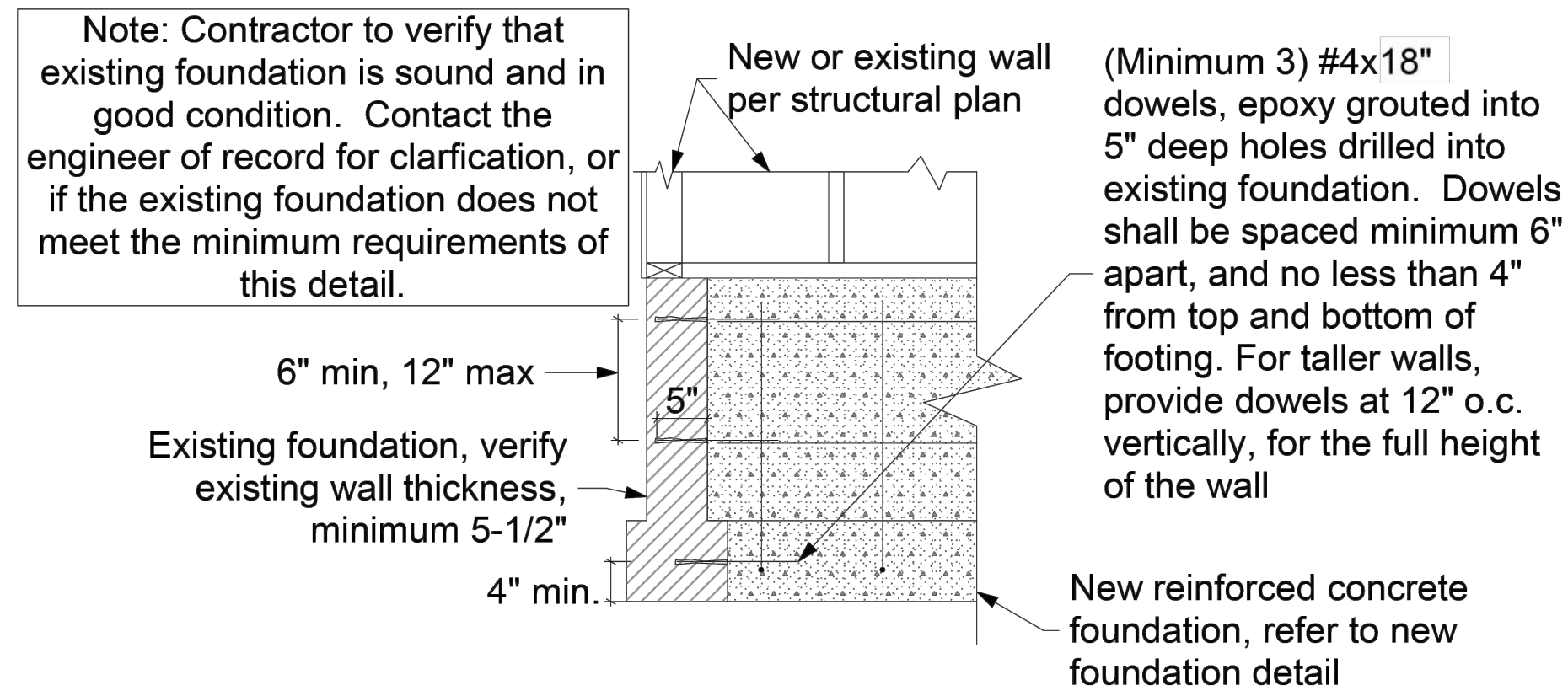
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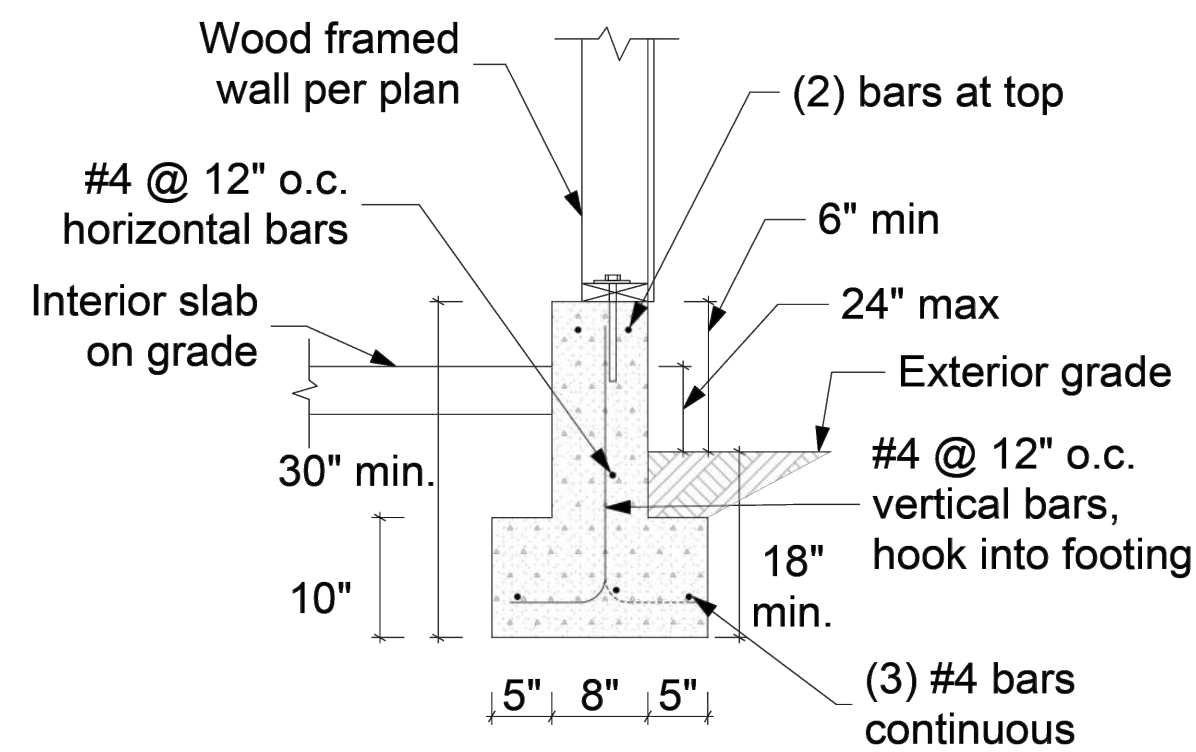
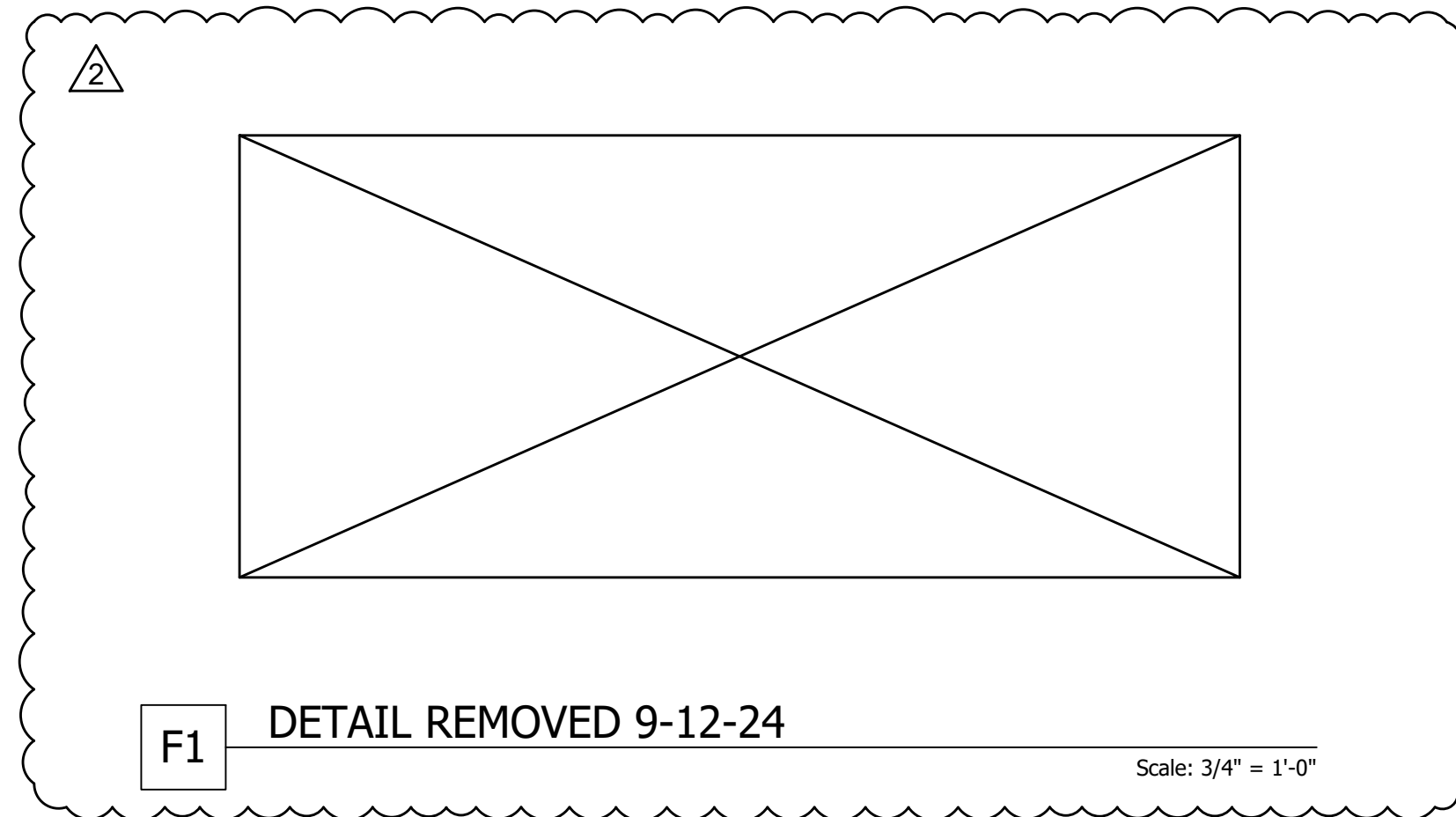
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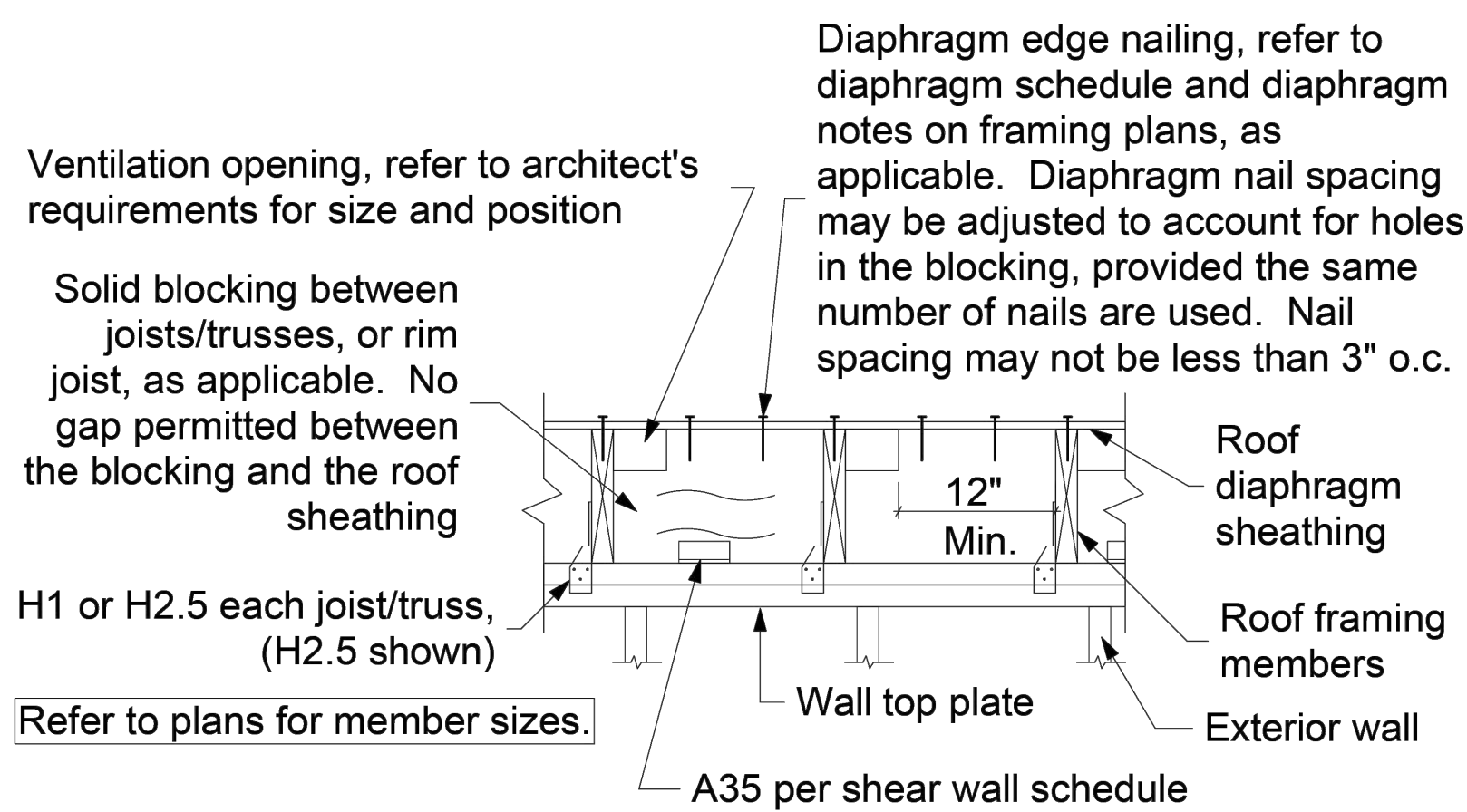
NF New Foundation to Existing Detail

Scale: 3/4" = 1'-0"



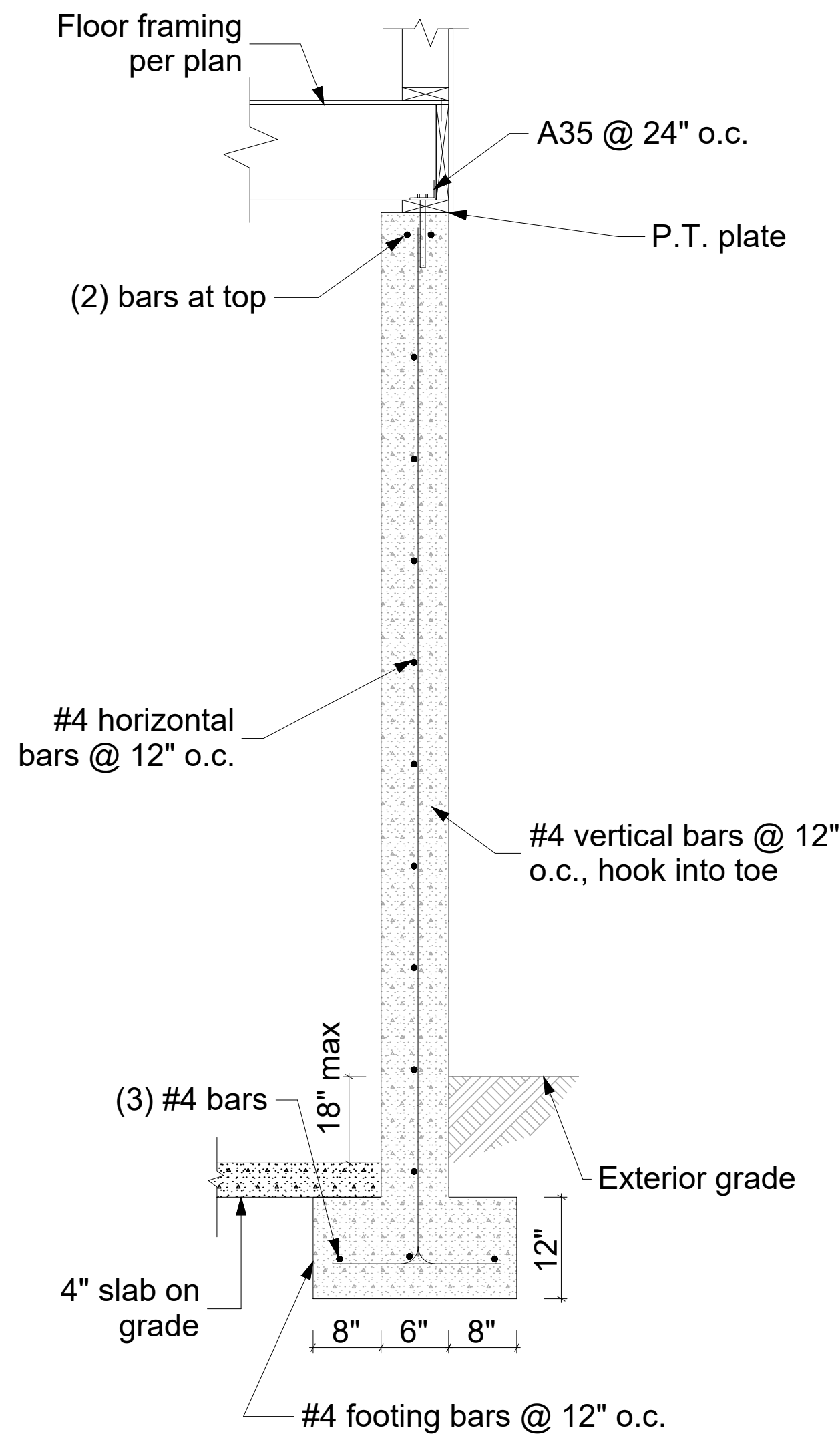
F3 Exterior Footing With Slab Detail

Scale: 3/4" = 1'-0"



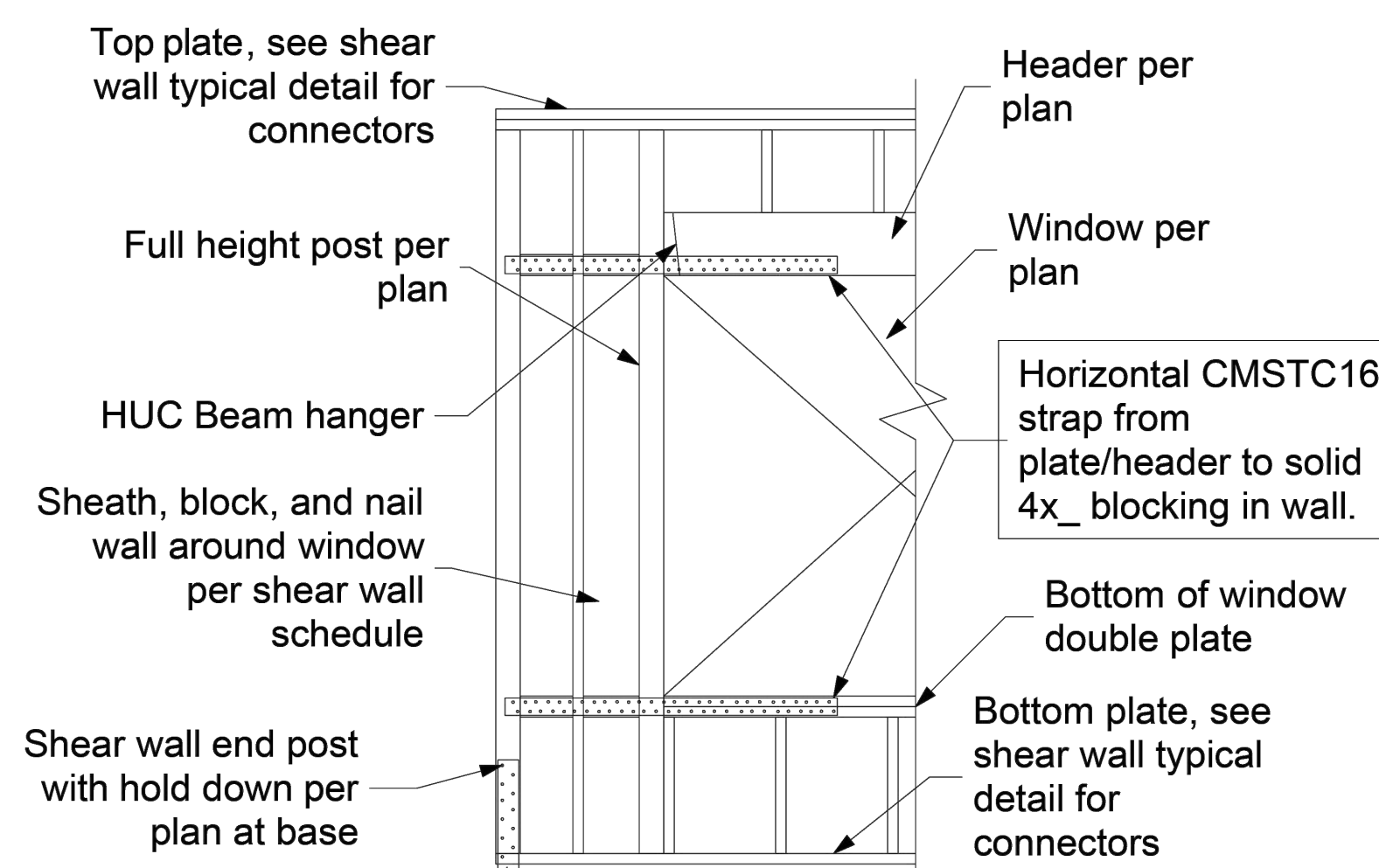
R1 Roof Ventilation Typical Detail

Scale: 1" = 1'-0"



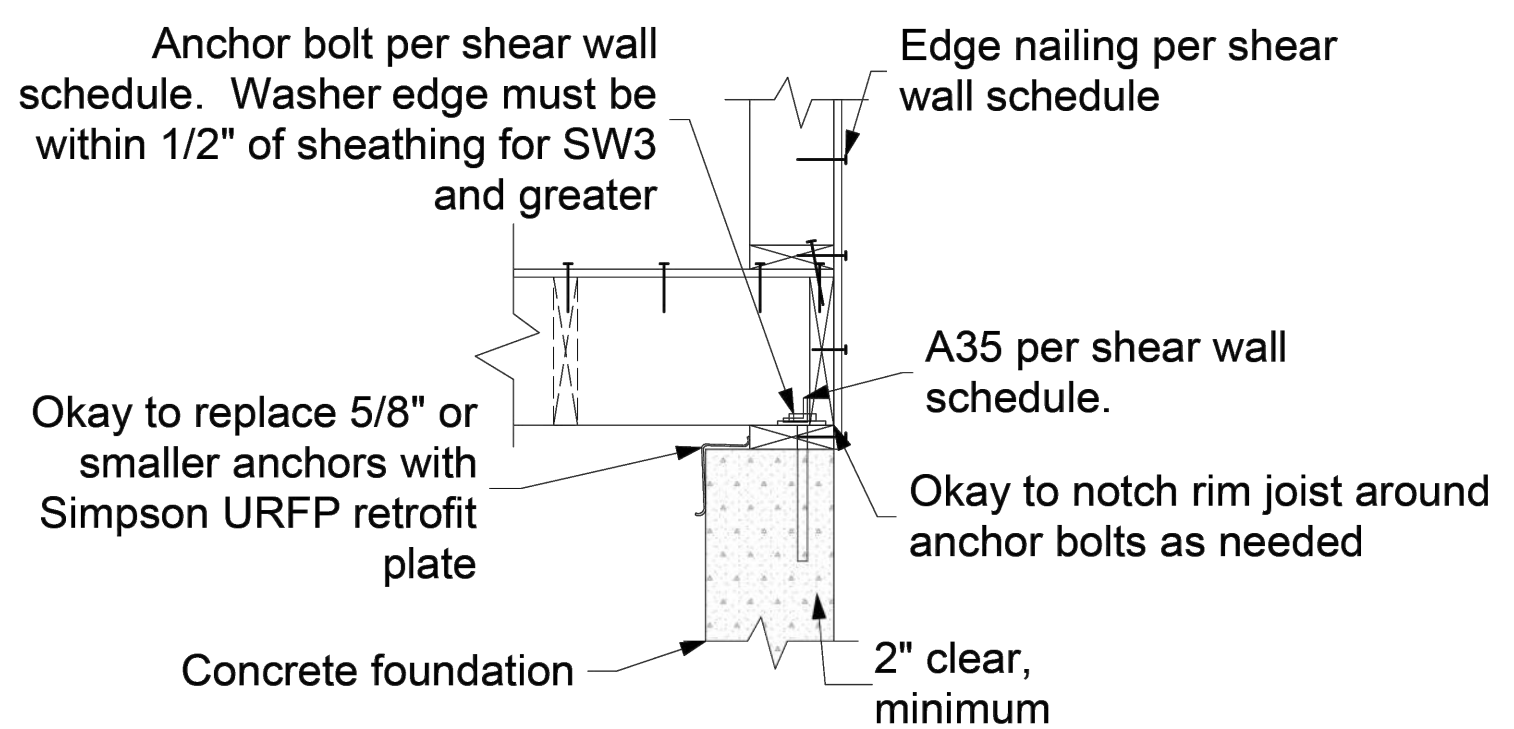
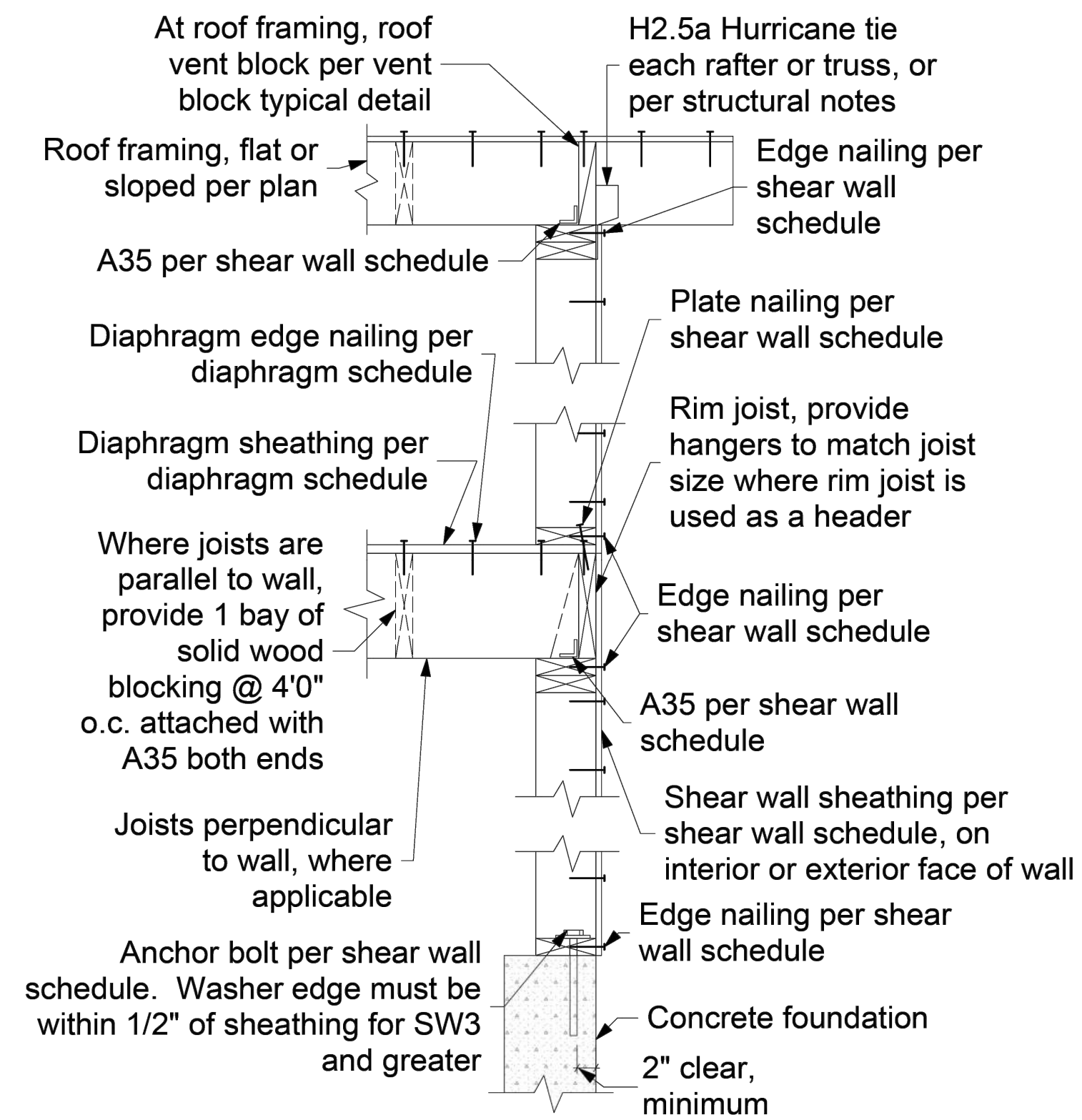
F2 Concrete Basement Wall Detail

Scale: 1/2" = 1'-0"



SW1 Shear Wall Around Opening Detail

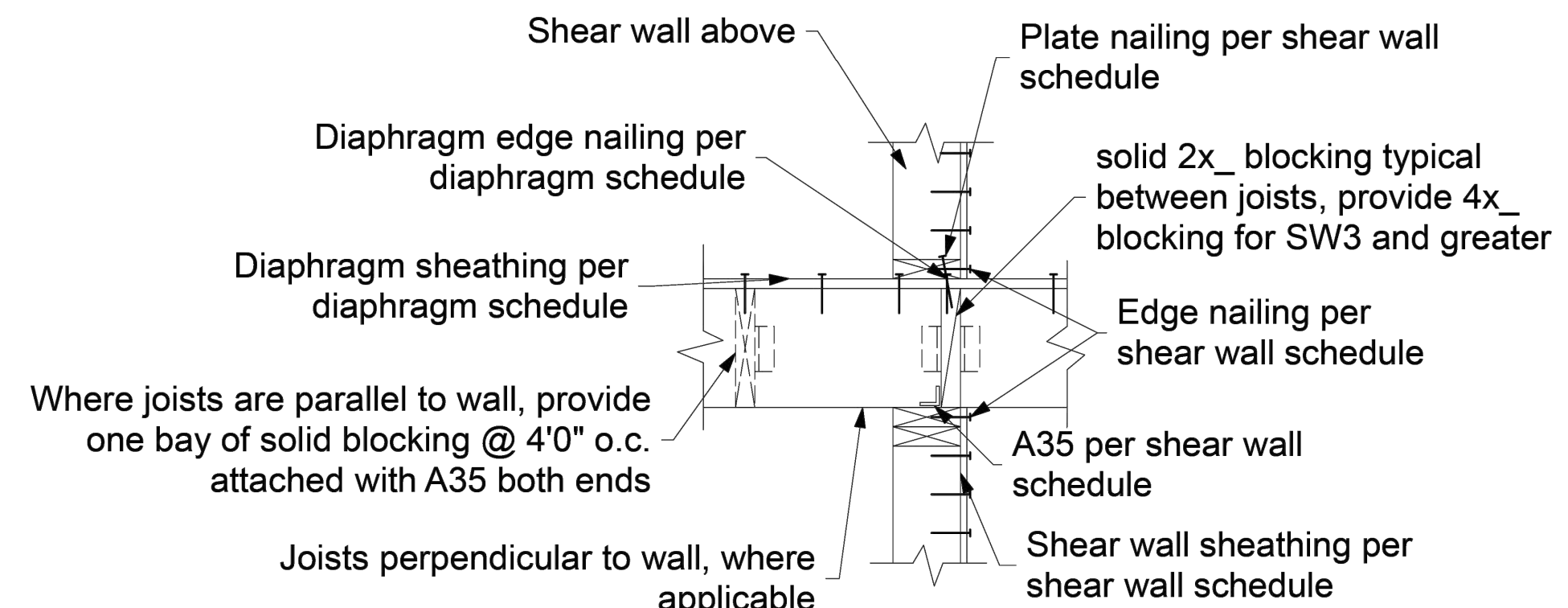
Scale: 1/2" = 1'-0"



Alternate Condition

SW2 Exterior Shear Wall Typical Detail

Scale: 1" = 1'-0"



SW3 Interior Shear Wall Typical Detail

Scale: 1" = 1'-0"



Consulting Structural Engineering Services  
6311 17th Ave NE, Seattle, WA 98115  
Phone: 206-527-1288  
Email: john@cses-engineering.com

**MACINTYRE**  
7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

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6311 17th Ave NE, Seattle, WA 98115  
Phone: 206-527-1288  
Email: john@cse-engineering.com

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7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

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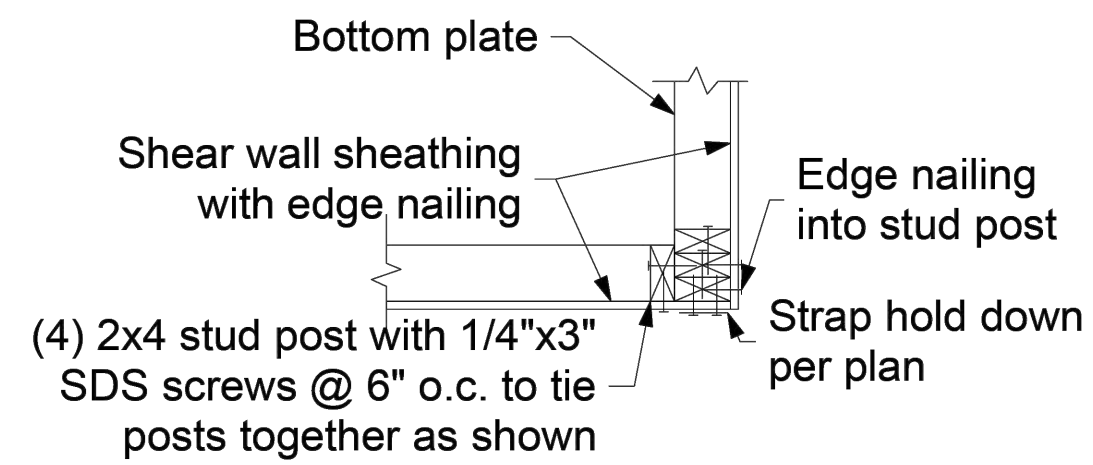
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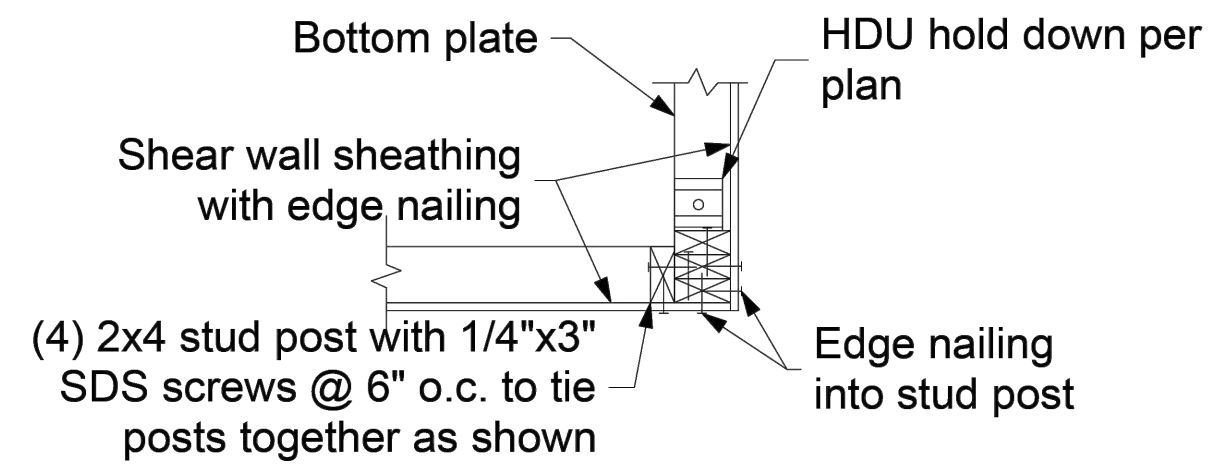
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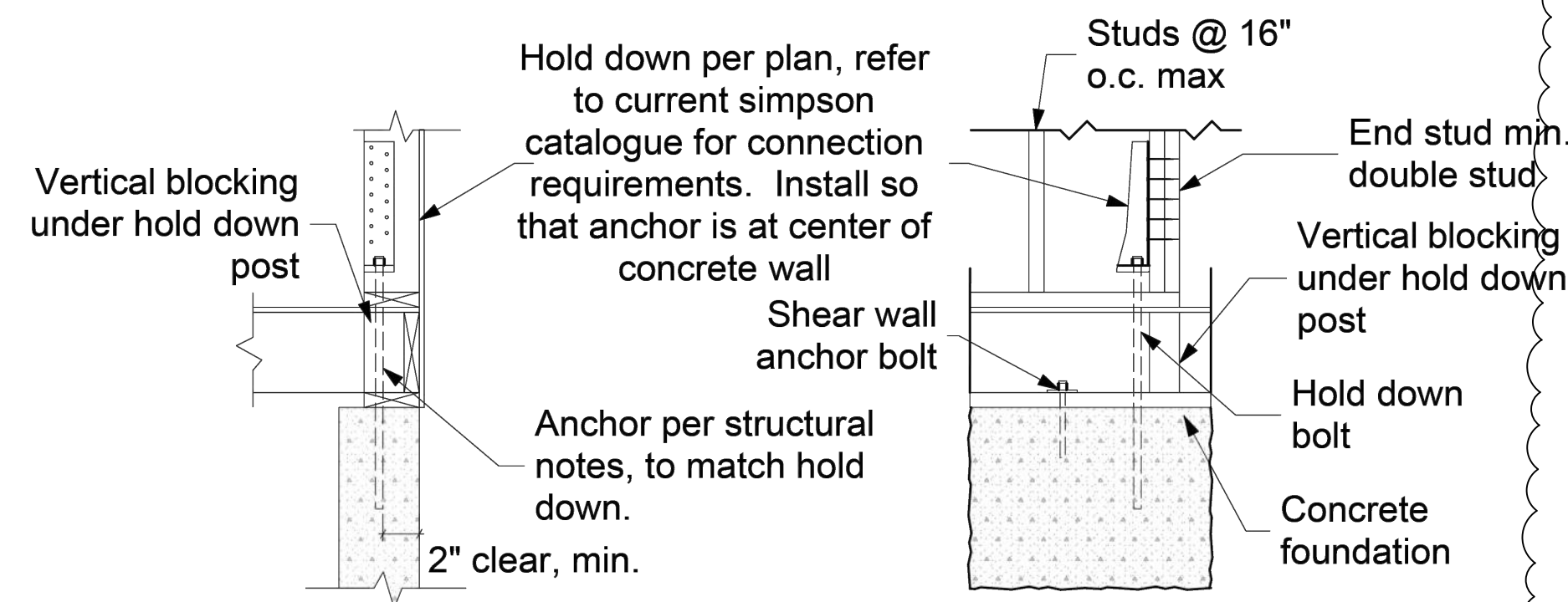
Strap Hold Down Configuration



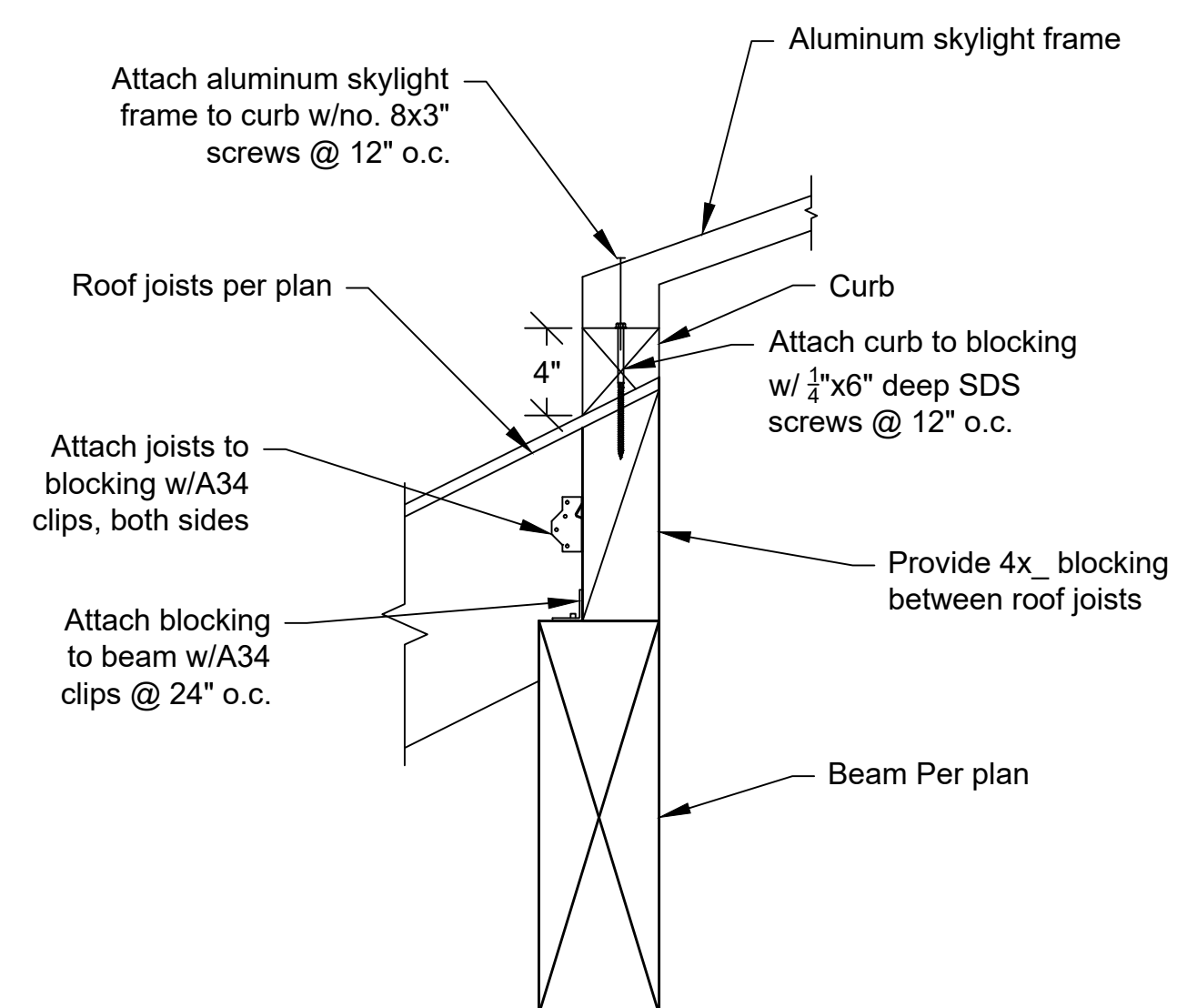
HDU Configuration

H1 Corner Hold Down Detail  
Scale: 1" = 1'-0"

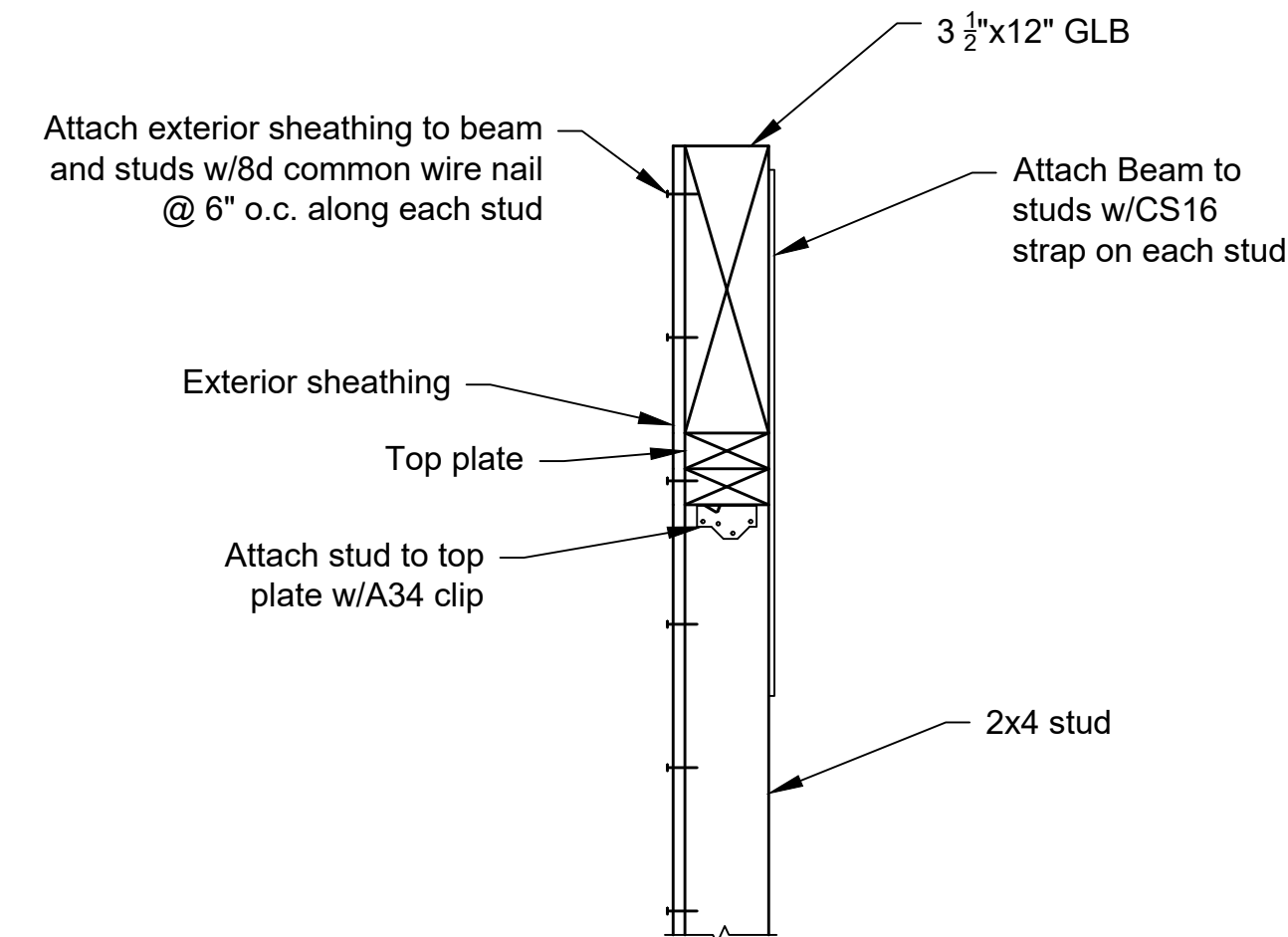
H2 Strap Hold Down Typical Detail  
Scale: 3/4" = 1'-0"



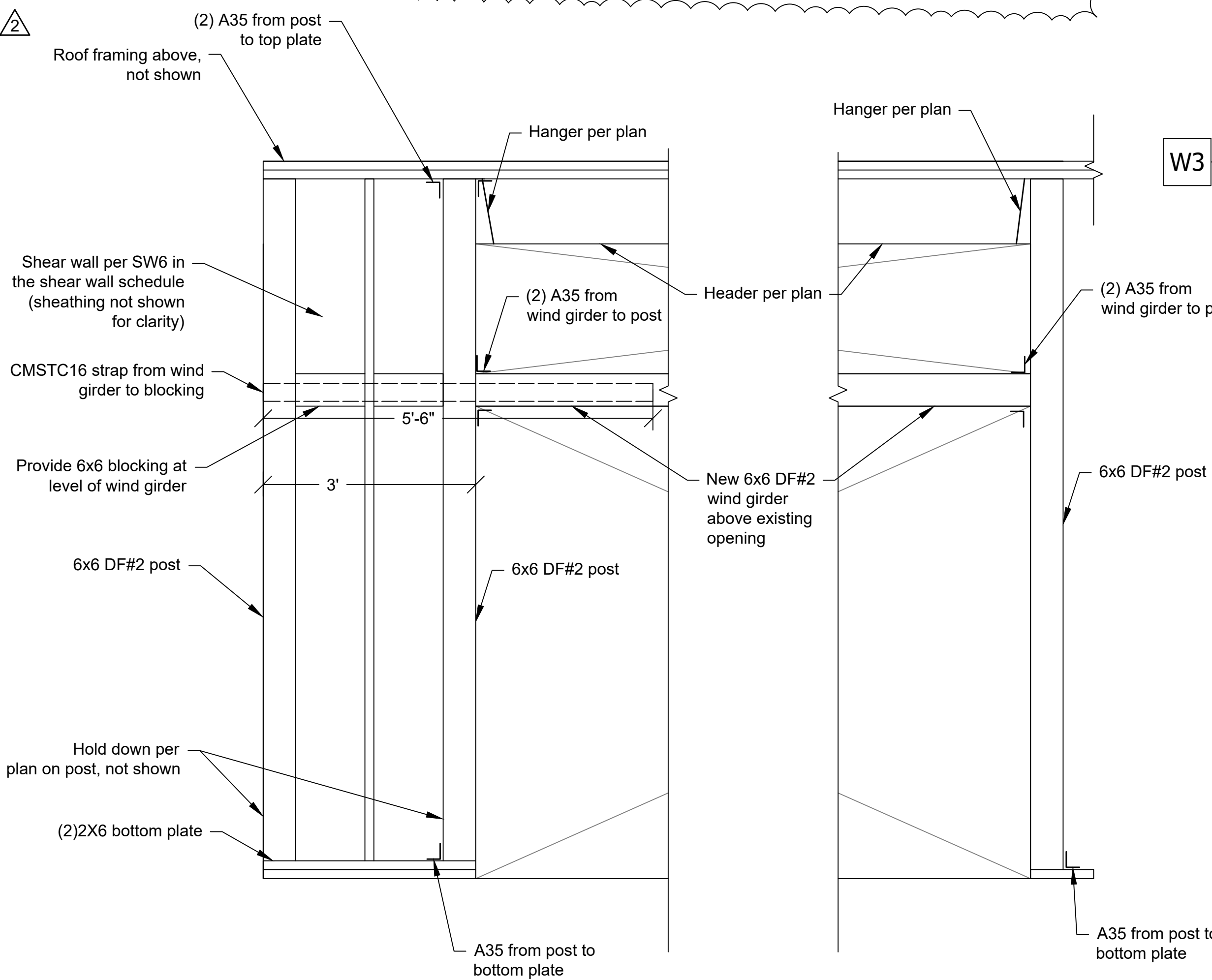
H3 Retrofit HDU Typical Detail  
Scale: 3/4" = 1'-0"



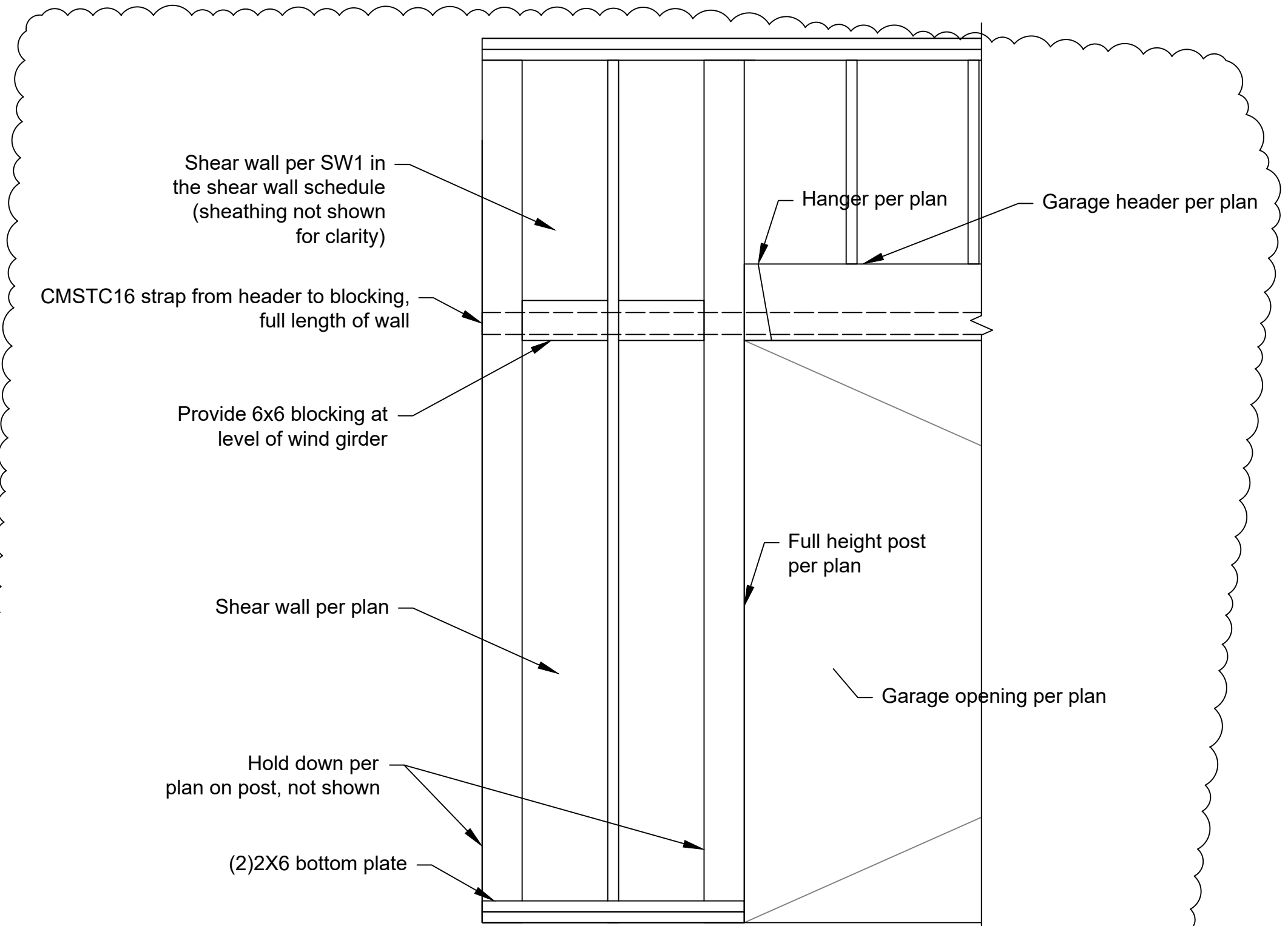
L1 Skylight Frame to Roof Framing Connection Detail  
Scale: 1-1/2" = 1'-0"



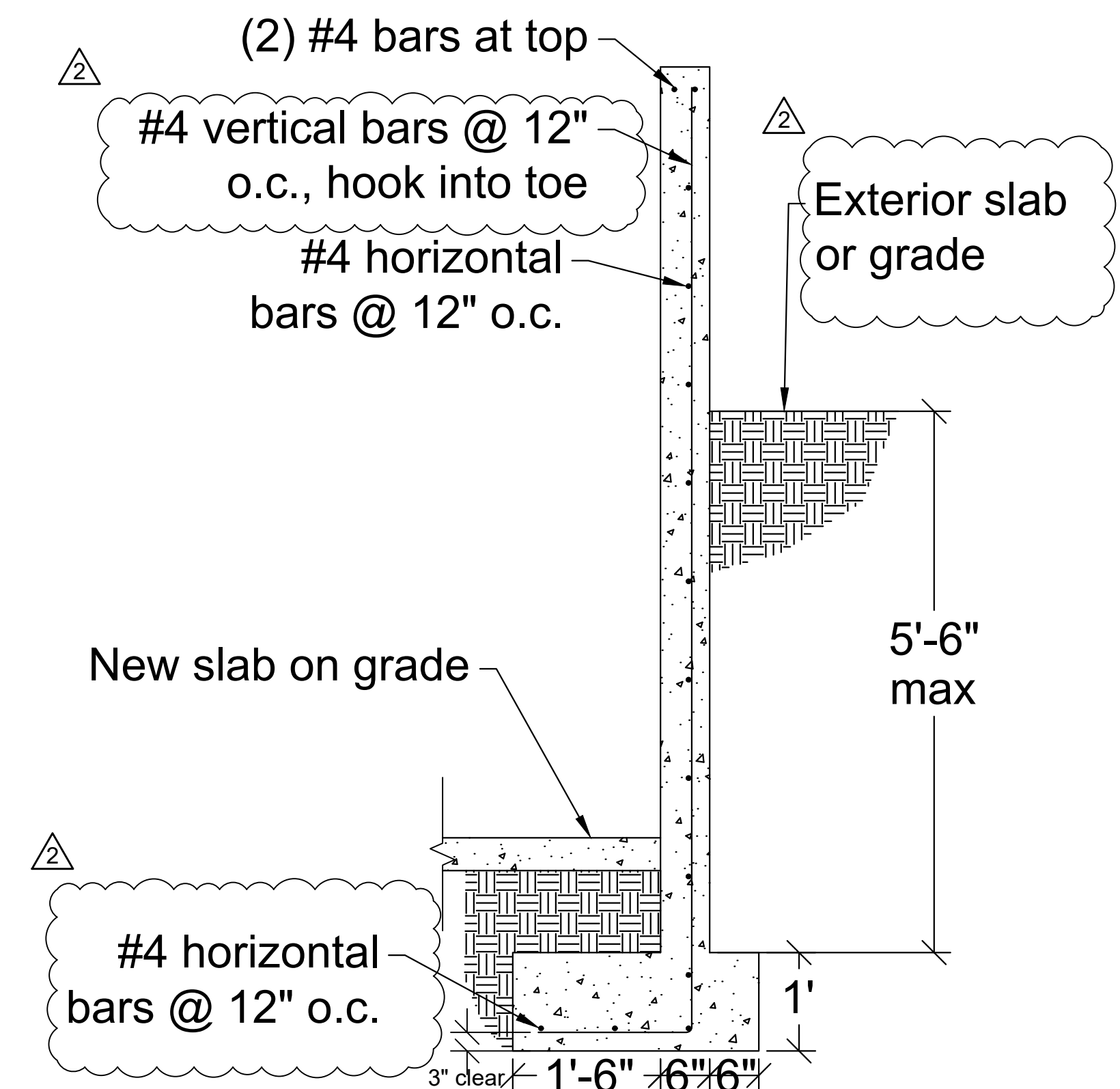
W1 East Wall Beam to Stud Connection  
Scale: 1-1/2" = 1'-0"



W2 West Wall Shear Wall & Wind Girder Detail  
Scale: 3/4" = 1'-0"



W3 Garage Shear Wall Detail  
Scale: 3/4" = 1'-0"



F4 East Retaining Wall Detail  
Scale: 3/4" = 1'-0"



Consulting Structural Engineering Services  
6311 17th Ave NE, Seattle, WA 98115  
Phone: 206-527-1288  
Email: john@cse-engineering.com

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7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

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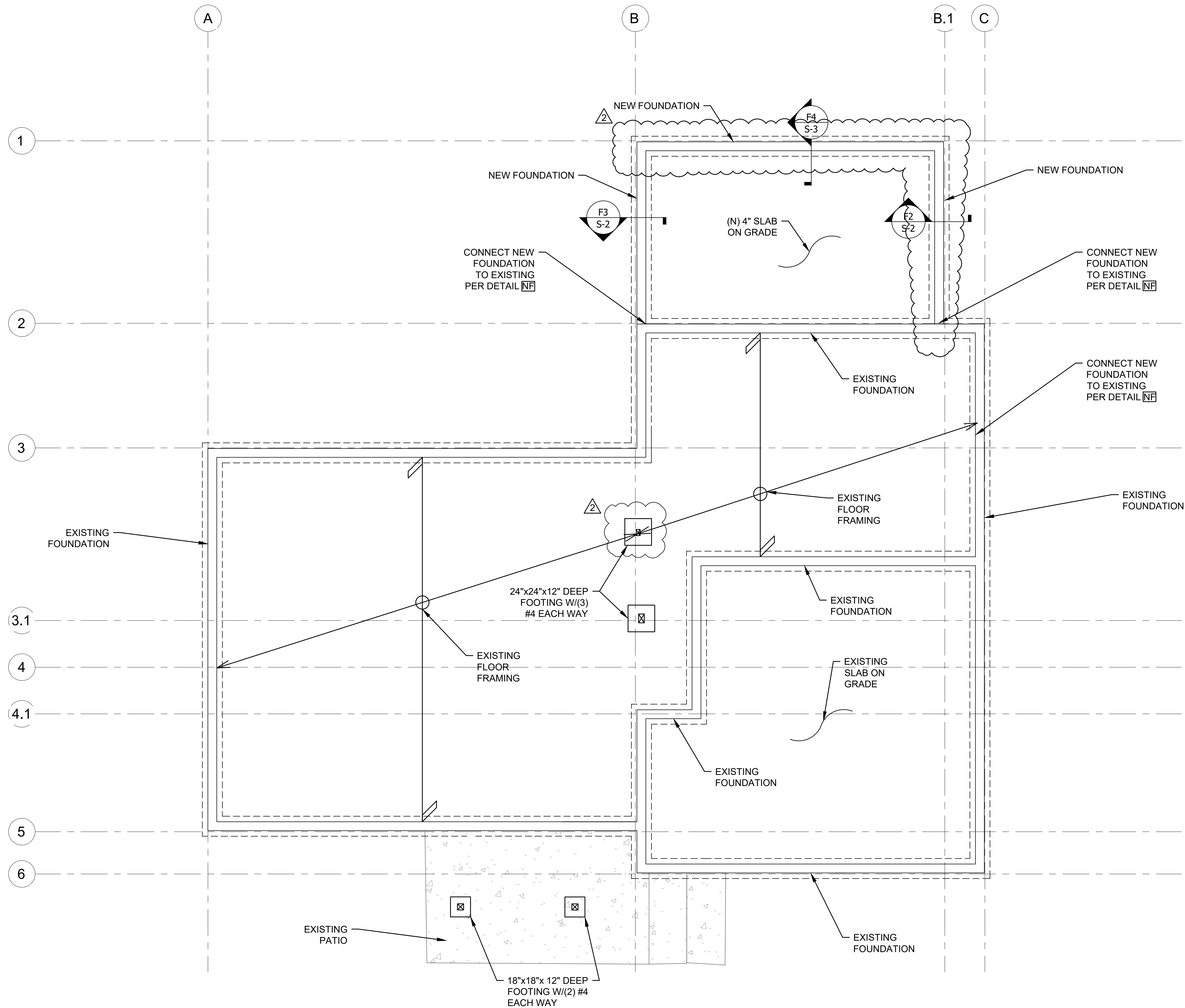
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1 MAIN FLOOR FRAMING AND FOUNDATION PLAN

Scale: 1/4" = 1'-0"



Consulting Structural Engineering Services  
6311 17th Ave NE, Seattle, WA 98115  
Phone: 206-527-1288  
Email: john@cse-engineering.com

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7520 MERCER TERRACE DR  
MERCER ISLAND WA, 98040

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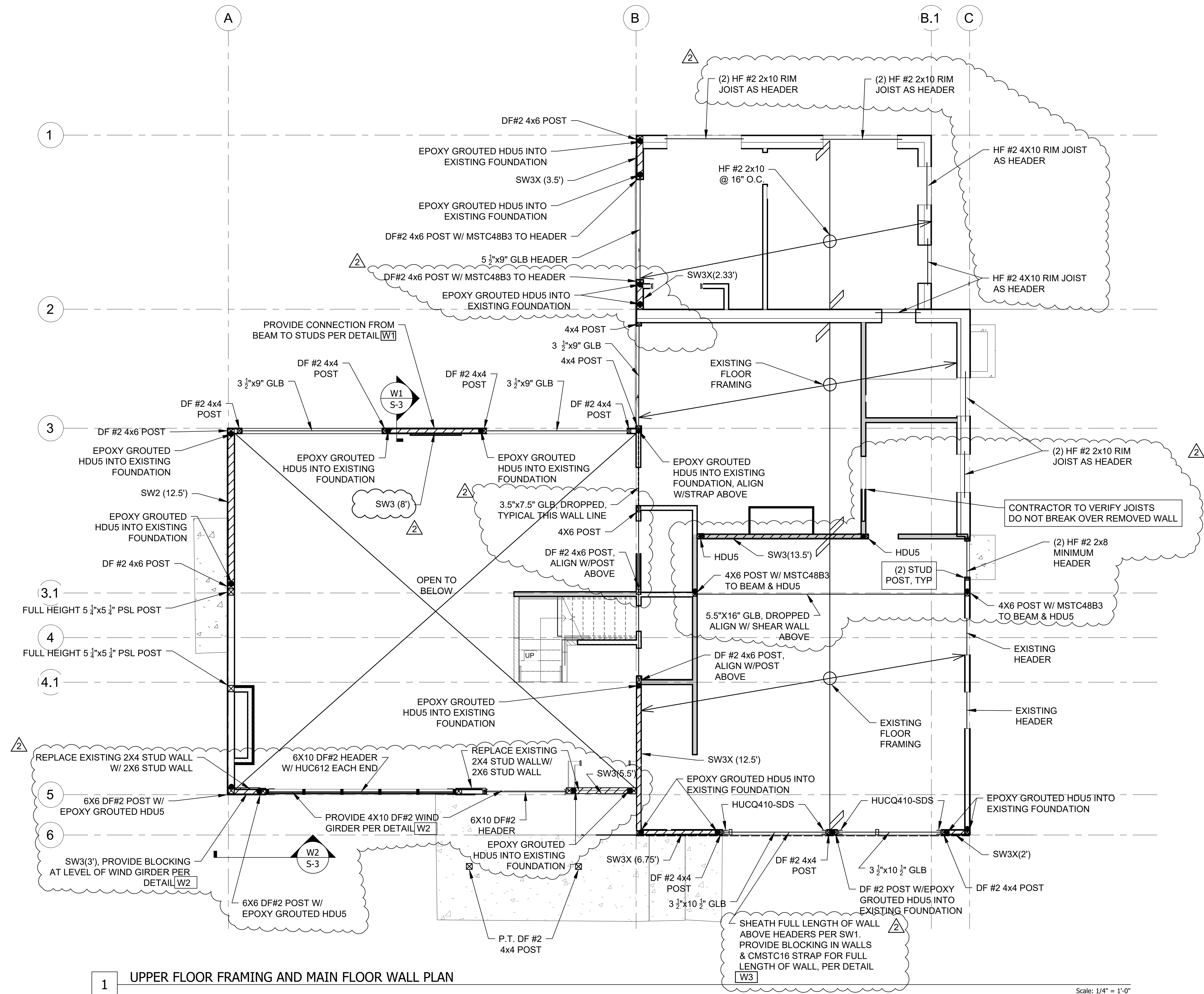
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1 UPPER FLOOR FRAMING AND MAIN FLOOR WALL PLAN

Scale: 1/4" = 1'-0"



Consulting Structural Engineering Services  
6311 17th Ave NE, Seattle, WA 98115  
Phone: 206-527-1288  
Email: john@cse-engineering.com

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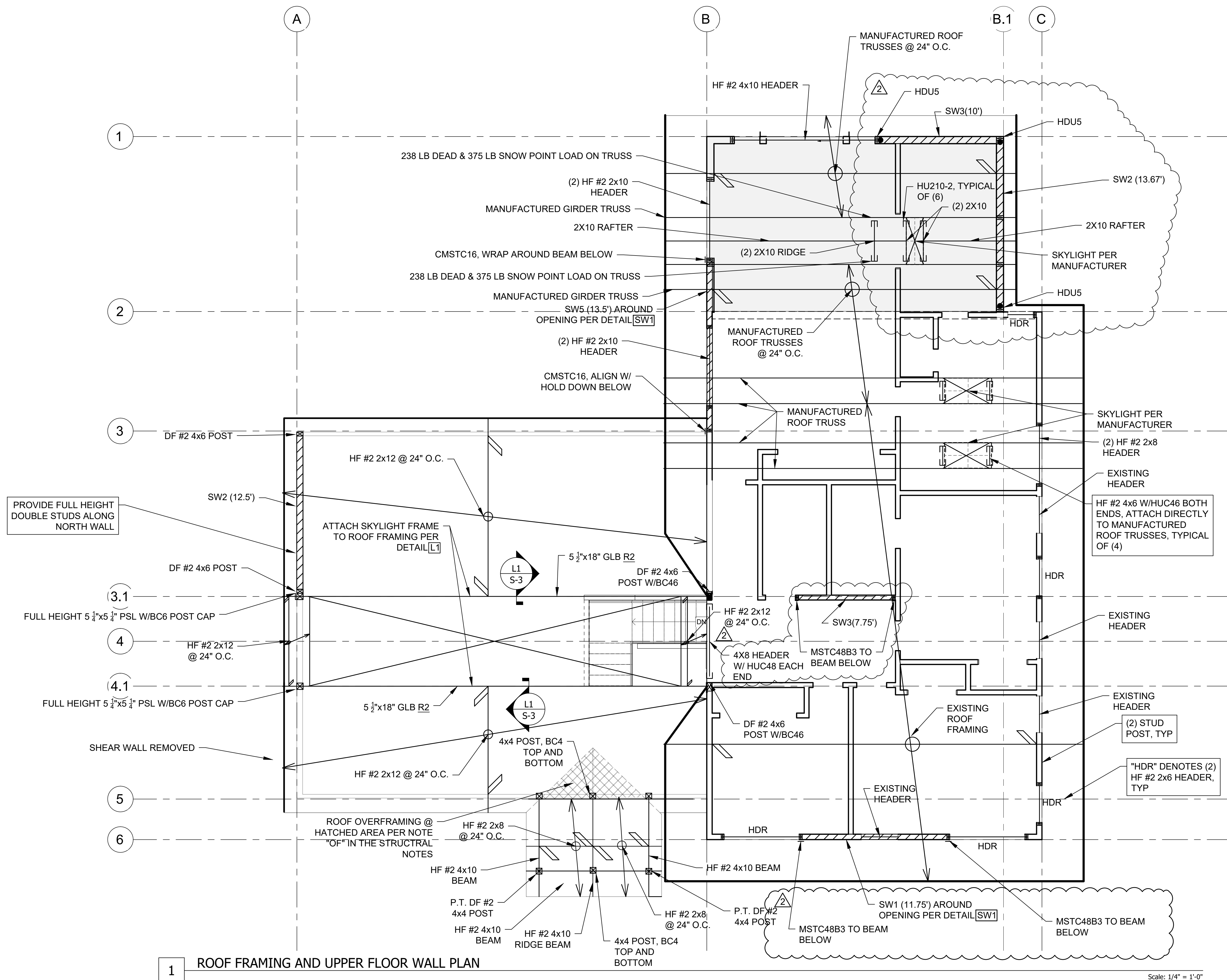
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### **PROJECT NARRATIVE (CRITICAL AREA REVIEW 2)**

The scope of work includes a Remodel of the lower roof line and a 2-story addition with ADU.

The roof remodel is a complete demo of the existing lower roof line and reconstruction maintaining the existing footprint with a new design. The addition is 632 SF of conditioned gross floor area and 316 SF of total lot coverage footprint. 316 SF ADU on level 1 and 316 SF addition to the existing primary bedroom on level 2. The proposed addition is located within a geo-hazard area on the site.

The GIS maps indicate that the eastern portion of the site is within an erosion and potential landslide hazard area. The project development will provide erosion control measures during construction and all disturbed areas and landscaping will be restored following construction.

Refer to Sheet L101 "Critical Area & Erosion Control Plan" of the Submittal Plan Set for implementation of erosion control measures during construction and restored landscaping areas. Recommendations have been implemented from the Geotech report prepared by Cobalt Geosciences LLC, licensed Geotech dated 08/22/2023.



Cobalt Geosciences, LLC  
P.O. Box 1792  
North Bend, WA 98045

August 22, 2023

Diego Pineda  
[diego@buildstuffstudios.com](mailto:diego@buildstuffstudios.com)

**RE: Limited Geotechnical Evaluation**

Proposed Additions  
7520 Mercer Terrace Drive  
Mercer Island, Washington

In accordance with your authorization, Cobalt Geosciences, LLC has prepared this letter to discuss the results of our geotechnical evaluation at the referenced site.

The purpose of our evaluation was to provide recommendations for foundation design, grading, and earthwork as well as discussion of mapped geologic hazards.

**Site Description**

The site is located at 7520 Mercer Terrace Drive in Mercer Island, Washington. The site consists of one irregularly shaped parcel (No. 5453600100) with a total area of 10,085 square feet.

The western portion of the site is developed with a single-family residence and driveway. The remainder of the property is undeveloped and vegetated with grasses, bushes and variable diameter trees.

The site slopes downward from east to west at magnitudes of 5 to 30 percent and relief of about 15 feet. The slope continues onto the property to the east, which is developed with a residence.

The eastern portions of the site are mapped with erosion and potential landslide hazards per City of Mercer Island GIS maps.

The site is bordered to the north and east by residences, to the south by SE 76<sup>th</sup> Street, and to the west by Mercer Terrace Drive.

The proposed development includes additions to the eastern portion of the structure. Site grading may include cuts and fills of about 3 feet or less and foundation loads are expected to be light. We should be provided with the final plans to verify that our recommendations remain valid and do not require updating.

**Area Geology**

The Geologic Map of Mercer Island, indicates that the site is underlain by Vashon Glacial Till.

Vashon Glacial Till consists of mixtures of silt, sand, gravel, clay and cobbles in a nonsorted matrix or diamict. These deposits become denser with depth below a weathered zone. The weathered zone can locally be loose and is typically 5 to 15 feet in thickness.

**Soil & Groundwater Conditions**

As part of our evaluation, we advanced two hand borings where accessible to determine the shallow soil and groundwater conditions.

The soils encountered were logged in the field and are described in accordance with the Unified Soil Classification System (USCS).

The hand borings encountered approximately 6 inches of topsoil and vegetation underlain by about 3 to 4 feet of loose to medium dense, silty-fine to medium grained sand with gravel (Weathered Glacial Till). These soils were underlain by medium dense to dense, silty-fine to medium grained sand with gravel (Vashon Glacial Till) which continued to the termination depths of the hand borings.

Groundwater was not observed or encountered in the explorations. Light volumes of groundwater could be present on or within the denser till at depth. The depth would likely be more than 7 feet.

Water table elevations often fluctuate over time. The groundwater level will depend on a variety of factors that may include seasonal precipitation, irrigation, land use, climatic conditions and soil permeability. Water levels at the time of the field investigation may be different from those encountered during the construction phase of the project. It would be necessary to install a piezometer to determine groundwater depths over a typical year.

### **City of Mercer Island GIS Mapped Hazards**

The City of Mercer Island GIS maps indicate that the eastern portion of the site is within an erosion and potential landslide hazard area.

While there are slope areas with magnitudes more than 15 percent, the site and steeper slope areas are underlain by soils consistent with glacial till. These deposits are resistant to global instability and severe erosion provided areas remain or are vegetated and/or surfaced with typical landscaping materials.

It is our opinion that the risk of erosion and landslide activity at this site is very low and will not be affected by the proposed construction provided erosion control measures are in place during construction and all areas are landscaping following construction. This also assumes that the slope areas east of the residence will remain vegetated. Mitigation for these hazards is not currently warranted.

### **Statement of Risk**

Per Section 19.07.160B3 of the Mercer Island City Code, development within geologic hazard areas require that a Geotechnical Engineer licensed within the State of Washington provide a statement of risk with supporting documentation indicating that one of the following conditions can be met:

- a. The geologic hazard area will be modified, or the development has been designed so that the risk to the lot and adjacent property is eliminated or mitigated such that the site is determined to be safe; or
- b. An evaluation of site specific subsurface conditions demonstrates that the proposed development is not located in a geologic hazard area; or
- c. Development practices are proposed for the alteration that would render the development as safe as if it were not located in a geologic hazard area; or
- d. The alteration is so minor as not to pose a threat to the public health, safety and welfare.

The project meets the criteria of c from above. Proper use of erosion control measures and permanent landscaping will result in a condition as if the development is not within a geologic hazard area.

This proposed development can be completed without adversely affecting geologic hazards near or within the site.

### Erosion Hazard

The Natural Resources Conservation Services (NRCS) maps for Snohomish County indicate that the site is underlain by Arents, Alderwood material (6 to 15 percent slopes). These soils have a "Slight" to "Moderate" erosion potential in a disturbed state.

It is our opinion that soil erosion potential at this project site can be reduced through landscaping and surface water runoff control. Typically, erosion of exposed soils will be most noticeable during periods of rainfall and may be controlled by the use of normal temporary erosion control measures, such as silt fences, hay bales, mulching, control ditches and diversion trenches. The typical wet weather season, with regard to site grading, is from October 31<sup>st</sup> to April 1<sup>st</sup>. Erosion control measures should be in place before the onset of wet weather.

### Seismic Parameters

The overall subsurface profile corresponds to a Site Class *D* as defined by Table 1613.5.2 of the International Building Code (IBC). A Site Class *D* applies to an overall profile consisting of medium dense to very dense soils within the upper 100 feet.

We referenced the U.S. Geological Survey (USGS) Earthquake Hazards Program Website to obtain values for  $S_s$ ,  $S_i$ ,  $F_a$ , and  $F_v$ . The USGS website includes the most updated published data on seismic conditions. The following tables provide seismic parameters from the USGS web site with referenced parameters from ASCE 7-16.

Seismic Design Parameters (ASCE 7-16)

| Site Class | Spectral Acceleration at 0.2 sec. (g) | Spectral Acceleration at 1.0 sec. (g) | Site Coefficients |       | Design Spectral Response Parameters |          | Design PGA |
|------------|---------------------------------------|---------------------------------------|-------------------|-------|-------------------------------------|----------|------------|
|            |                                       |                                       | $F_a$             | $F_v$ | $S_{DS}$                            | $S_{D1}$ |            |
| D          | 1.472                                 | 0.508                                 | 1.0               | Null  | 0.982                               | Null     | 0.63       |

Additional seismic considerations include liquefaction potential and amplification of ground motions by soft/loose soil deposits. The liquefaction potential is highest for loose sand with a high groundwater table. The site has a low likelihood of liquefaction. For items listed as "Null" see Section 11.4.8 of the ASCE.

## Conclusions and Recommendations

---

### General

The site is underlain by soils consistent with Vashon Glacial Till. This soil becomes medium dense to dense below a weathered zone of locally loose soils. The proposed additions may be supported on shallow foundation systems bearing on medium dense or firmer native soils or on structural fill placed on the native soils.

Local overexcavation or recompaction of loose weathered native soils may be necessary depending on the proposed elevations and locations of the new footings.

The risk of landslide activity or severe erosion at the site is low to very low. Provided typical temporary erosion control measures are in place during construction and all areas are resurfaced with mulches/bark/compost and plantings or other landscaping, the risk of these hazards will remain low to very low.

### Site Preparation

Trees, shrubs and other vegetation should be removed prior to stripping of surficial organic-rich soil and fill. Based on observations from the site investigation program, it is anticipated that the stripping depth will be 6 to 18 inches. Deeper excavations will be necessary in areas of loose soils and fill, if and where present.

The native soils consist of silty-sand and poorly graded sand trace to with silt. Most of the native soils may be used as structural fill provided they achieve compaction requirements and are within 3 percent of the optimum moisture. Some of these soils may only be suitable for use as fill during the summer months, as they will be above the optimum moisture levels in their current state. These soils are variably moisture sensitive and may degrade during periods of wet weather and under equipment traffic.

Imported structural fill should consist of a sand and gravel mixture with a maximum grain size of 3 inches and less than 5 percent fines (material passing the U.S. Standard No. 200 Sieve). Structural fill should be placed in maximum lift thicknesses of 12 inches and should be compacted to a minimum of 95 percent of the modified proctor maximum dry density, as determined by the ASTM D 1557 test method.

### Temporary Excavations

Based on our understanding of the project, we anticipate that the grading could include local cuts on the order of approximately 3 feet or less for foundation and most of the utility placement. Any deeper temporary excavations should be sloped no steeper than 1.5H:1V (Horizontal:Vertical) in loose native soils and fill and 1H:1V in medium dense native soils. If an excavation is subject to heavy vibration or surcharge loads, we recommend that the excavations be sloped no steeper than 2H:1V, where room permits.

Temporary cuts should be in accordance with the Washington Administrative Code (WAC) Part N, Excavation, Trenching, and Shoring. Temporary slopes should be visually inspected daily by a qualified person during construction activities and the inspections should be documented in daily reports. The contractor is responsible for maintaining the stability of the temporary cut slopes and reducing slope erosion during construction.

Temporary cut slopes should be covered with visqueen to help reduce erosion during wet weather, and the slopes should be closely monitored until the permanent retaining systems or slope configurations are complete. Materials should not be stored or equipment operated within 10 feet of the top of any temporary cut slope.

Soil conditions may not be completely known from the geotechnical investigation. In the case of temporary cuts, the existing soil conditions may not be completely revealed until the excavation work exposes the soil. Typically, as excavation work progresses the maximum inclination of temporary slopes will need to be re-evaluated by the geotechnical engineer so that supplemental recommendations can be made. Soil and groundwater conditions can be highly variable. Scheduling for soil work will need to be adjustable, to deal with unanticipated conditions, so that the project can proceed and required deadlines can be met.

If any variations or undesirable conditions are encountered during construction, we should be notified so that supplemental recommendations can be made. If room constraints or groundwater conditions do not permit temporary slopes to be cut to the maximum angles allowed by the WAC, temporary shoring systems may be required. The contractor should be responsible for developing temporary shoring systems, if needed. We recommend that Cobalt Geosciences and the project structural engineer review temporary shoring designs prior to installation, to verify the suitability of the proposed systems.

## **Foundation Design**

The proposed additions may be supported on shallow spread footing foundation systems bearing on undisturbed medium dense or firmer native soils or on properly compacted structural fill placed on the suitable native soils. Any undocumented fill and/or loose native soils should be removed and replaced with structural fill below foundation elements. Structural fill below footings should consist of clean angular rock 5/8 to 4 inches in size. We should verify soil conditions during foundation excavation work.

For shallow foundation support, we recommend widths of at least 16 and 24 inches, respectively, for continuous wall and isolated column footings supporting the proposed structure. Provided that the footings are supported as recommended above, a net allowable bearing pressure of 2,000 pounds per square foot (psf) may be used for design.

A 1/3 increase in the above value may be used for short duration loads, such as those imposed by wind and seismic events. Structural fill placed on bearing, native subgrade should be compacted to at least 95 percent of the maximum dry density based on ASTM Test Method D1557. Footing excavations should be inspected to verify that the foundations will bear on suitable material.

Exterior footings should have a minimum depth of 18 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower. Interior footings should have a minimum depth of 12 inches below pad subgrade (soil grade) or adjacent exterior grade, whichever is lower.

If constructed as recommended, the total foundation settlement is not expected to exceed 1 inch. Differential settlement, along a 25-foot exterior wall footing, or between adjoining column footings, should be less than 1/2 inch. This translates to an angular distortion of 0.002. Most settlement is expected to occur during construction, as the loads are applied. However, additional post-construction settlement may occur if the foundation soils are flooded or saturated. All footing excavations should be observed by a qualified geotechnical consultant.

Resistance to lateral footing displacement can be determined using an allowable friction factor of 0.40 acting between the base of foundations and the supporting subgrades. Lateral resistance for footings can also be developed using an allowable equivalent fluid passive pressure of 250 pounds per cubic foot (pcf) acting against the appropriate vertical footing faces (neglect the upper 12 inches below grade in exterior areas). The frictional and passive resistance of the soil may be combined without reduction in determining the total lateral resistance.

Care should be taken to prevent wetting or drying of the bearing materials during construction. Any extremely wet or dry materials, or any loose or disturbed materials at the bottom of the footing excavations, should be removed prior to placing concrete. The potential for wetting or drying of the bearing materials can be reduced by pouring concrete as soon as possible after completing the footing excavation and evaluating the bearing surface by the geotechnical engineer or his representative.

### Concrete Retaining Walls

The following table, titled **Wall Design Criteria**, presents the recommended soil related design parameters for retaining walls with a level backslope. Contact Cobalt if an alternate retaining wall system is used. This has been included for new cast in place walls, if any are proposed.

| <b>Wall Design Criteria</b>                                                   |                                                     |
|-------------------------------------------------------------------------------|-----------------------------------------------------|
| "At-rest" Conditions (Lateral Earth Pressure – EFD <sup>+</sup> )             | 55 pcf (Equivalent Fluid Density)                   |
| "Active" Conditions (Lateral Earth Pressure – EFD <sup>+</sup> )              | 35 pcf (Equivalent Fluid Density)                   |
| Seismic Increase for "At-rest" Conditions (Lateral Earth Pressure)            | 14H* (Uniform Distribution)                         |
| Seismic Increase for "Active" Conditions (Lateral Earth Pressure)             | 7H* (Uniform Distribution)                          |
| Passive Earth Pressure on Low Side of Wall (Allowable, includes F.S. = 1.5)   | Neglect upper 2 feet, then 250 pcf EFD <sup>+</sup> |
| Soil-Footing Coefficient of Sliding Friction (Allowable; includes F.S. = 1.5) | 0.40                                                |

\*H is the height of the wall; Increase based on one in 500 year seismic event (10 percent probability of being exceeded in 50 years),

<sup>+</sup>EFD – Equivalent Fluid Density. Assumes excavation into stiff to hard soils for passive pressures.

The stated lateral earth pressures do not include the effects of hydrostatic pressure generated by water accumulation behind the retaining walls. Uniform horizontal lateral active and at-rest pressures on the retaining walls from vertical surcharges behind the wall may be calculated using active and at-rest lateral earth pressure coefficients of 0.3 and 0.5, respectively. A soil unit weight of 125 pcf may be used to calculate vertical earth surcharges.

To reduce the potential for the buildup of water pressure against the walls, continuous footing drains (with cleanouts) should be provided at the bases of the walls. The footing drains should consist of a minimum 4-inch diameter perforated pipe, sloped to drain, with perforations placed down and enveloped by a minimum 6 inches of pea gravel in all directions.

The backfill adjacent to and extending a lateral distance behind the walls at least 2 feet should consist of free-draining granular material. All free draining backfill should contain less than 3 percent fines (passing the U.S. Standard No. 200 Sieve) based upon the fraction passing the U.S. Standard No. 4 Sieve with at least 30 percent of the material being retained on the U.S. Standard No. 4 Sieve. The primary purpose of the free-draining material is the reduction of hydrostatic pressure. Some potential for the moisture to contact the back face of the wall may exist, even with treatment, which may require that more extensive waterproofing be specified for walls, which require interior moisture sensitive finishes.

We recommend that the backfill be compacted to at least 90 percent of the maximum dry density based on ASTM Test Method D1557. In place density tests should be performed to verify adequate compaction. Soil compactors place transient surcharges on the backfill. Consequently, only light hand operated equipment is recommended within 3 feet of walls so that excessive stress is not imposed on the walls.

### **Slab-on-Grade**

We recommend that the upper 12 inches of the existing native soils within slab areas be re-compacted to at least 95 percent of the modified proctor (ASTM D1557 Test Method).

Often, a vapor barrier is considered below concrete slab areas. However, the usage of a vapor barrier could result in curling of the concrete slab at joints. Floor covers sensitive to moisture typically requires the usage of a vapor barrier. A materials or structural engineer should be consulted regarding the detailing of the vapor barrier below concrete slabs. Exterior slabs typically do not utilize vapor barriers.

The American Concrete Institutes ACI 360R-06 Design of Slabs on Grade and ACI 302.1R-04 Guide for Concrete Floor and Slab Construction are recommended references for vapor barrier selection and floor slab detailing.

Slabs on grade may be designed using a coefficient of subgrade reaction of 150 pounds per cubic inch (pci) assuming the slab-on-grade base course is underlain by structural fill placed and compacted as outlined above. A 4- to 6-inch-thick capillary break layer should be placed over the prepared subgrade. This material should consist of pea gravel or 5/8 inch clean angular rock.

A perimeter drainage system is recommended unless interior slab areas are elevated a minimum of 12 inches above adjacent exterior grades. If installed, a perimeter drainage system should consist of a 4-inch diameter perforated drain pipe surrounded by a minimum 6 inches of drain rock wrapped in a non-woven geosynthetic filter fabric to reduce migration of soil particles into the drainage system. The perimeter drainage system should discharge by gravity flow to a suitable stormwater system.

Exterior grades surrounding buildings should be sloped at a minimum of one percent to facilitate surface water flow away from the building and preferably with a relatively impermeable surface cover immediately adjacent to the building.

### **Erosion and Sediment Control**

Erosion and sediment control (ESC) is used to reduce the transportation of eroded sediment to wetlands, streams, lakes, drainage systems, and adjacent properties. Erosion and sediment control measures should be implemented, and these measures should be in general accordance with local regulations. At a minimum, the following basic recommendations should be incorporated into the design of the erosion and sediment control features for the site:

- Schedule the soil, foundation, utility, and other work requiring excavation or the disturbance of the site soils, to take place during the dry season (generally May through September). However, provided precautions are taken using Best Management Practices (BMP's), grading activities can be completed during the wet season (generally October through April).
- All site work should be completed and stabilized as quickly as possible.
- Additional perimeter erosion and sediment control features may be required to reduce the possibility of sediment entering the surface water. This may include additional silt fences, silt fences with a higher Apparent Opening Size (AOS), construction of a berm, or other filtration systems.
- Any runoff generated by dewatering discharge should be treated through construction of a sediment trap if there is sufficient space. If space is limited other filtration methods will need to be incorporated.

## **CONSTRUCTION FIELD REVIEWS**

Cobalt Geosciences should be retained to provide part time field review during construction in order to verify that the soil conditions encountered are consistent with our design assumptions and that the intent of our recommendations is being met. This will require field and engineering review to:

- Monitor and test structural fill placement and soil compaction
- Observe bearing capacity at foundation locations
- Monitor foundation drainage placement
- Observe excavation stability

Geotechnical design services should also be anticipated during the subsequent final design phase to support the structural design and address specific issues arising during this phase. Field and engineering review services will also be required during the construction phase in order to provide a Final Letter for the project.

## **CLOSURE**

This report was prepared for the exclusive use of Diego Pineda and his appointed consultants. Any use of this report or the material contained herein by third parties, or for other than the intended purpose, should first be approved in writing by Cobalt Geosciences, LLC.

The recommendations contained in this report are based on assumed continuity of soils with those of our test holes and assumed structural loads. Cobalt Geosciences should be provided with final architectural and civil drawings when they become available in order that we may review our design recommendations and advise of any revisions, if necessary.

Use of this report is subject to the Statement of General Conditions provided in Appendix A. It is the responsibility of Diego Pineda who is identified as "the Client" within the Statement of General Conditions, and its agents to review the conditions and to notify Cobalt Geosciences should any of these not be satisfied.

Sincerely,

**Cobalt Geosciences, LLC**



8/22/2023  
Phil Haberman, PE, LG, LEG  
Princip

### **Statement of General Conditions**

**USE OF THIS REPORT:** This report has been prepared for the sole benefit of the Client or its agent and may not be used by any third party without the express written consent of Cobalt Geosciences and the Client. Any use which a third party makes of this report is the responsibility of such third party.

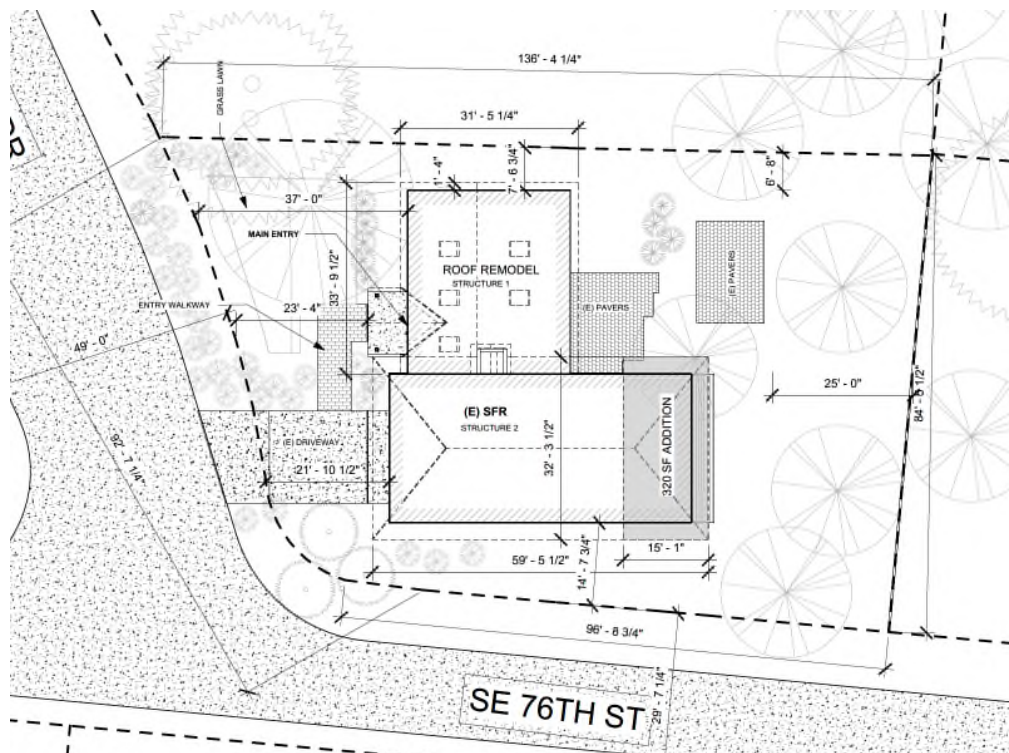
**BASIS OF THE REPORT:** The information, opinions, and/or recommendations made in this report are in accordance with Cobalt Geosciences present understanding of the site specific project as described by the Client. The applicability of these is restricted to the site conditions encountered at the time of the investigation or study. If the proposed site specific project differs or is modified from what is described in this report or if the site conditions are altered, this report is no longer valid unless Cobalt Geosciences is requested by the Client to review and revise the report to reflect the differing or modified project specifics and/or the altered site conditions.

**STANDARD OF CARE:** Preparation of this report, and all associated work, was carried out in accordance with the normally accepted standard of care in the state of execution for the specific professional service provided to the Client. No other warranty is made.

**INTERPRETATION OF SITE CONDITIONS:** Soil, rock, or other material descriptions, and statements regarding their condition, made in this report are based on site conditions encountered by Cobalt Geosciences at the time of the work and at the specific testing and/or sampling locations. Classifications and statements of condition have been made in accordance with normally accepted practices which are judgmental in nature; no specific description should be considered exact, but rather reflective of the anticipated material behavior. Extrapolation of in situ conditions can only be made to some limited extent beyond the sampling or test points. The extent depends on variability of the soil, rock and groundwater conditions as influenced by geological processes, construction activity, and site use.

**VARYING OR UNEXPECTED CONDITIONS:** Should any site or subsurface conditions be encountered that are different from those described in this report or encountered at the test locations, Cobalt Geosciences must be notified immediately to assess if the varying or unexpected conditions are substantial and if reassessments of the report conclusions or recommendations are required. Cobalt Geosciences will not be responsible to any party for damages incurred as a result of failing to notify Cobalt Geosciences that differing site or sub-surface conditions are present upon becoming aware of such conditions.

**PLANNING, DESIGN, OR CONSTRUCTION:** Development or design plans and specifications should be reviewed by Cobalt Geosciences, sufficiently ahead of initiating the next project stage (property acquisition, tender, construction, etc), to confirm that this report completely addresses the elaborated project specifics and that the contents of this report have been properly interpreted. Specialty quality assurance services (field observations and testing) during construction are a necessary part of the evaluation of sub-subsurface conditions and site preparation works. Site work relating to the recommendations included in this report should only be carried out in the presence of a qualified geotechnical engineer; Cobalt Geosciences cannot be responsible for site work carried out without being present.



Provided site plan



HB-1 Approximate Hand Boring Location



King County Imap

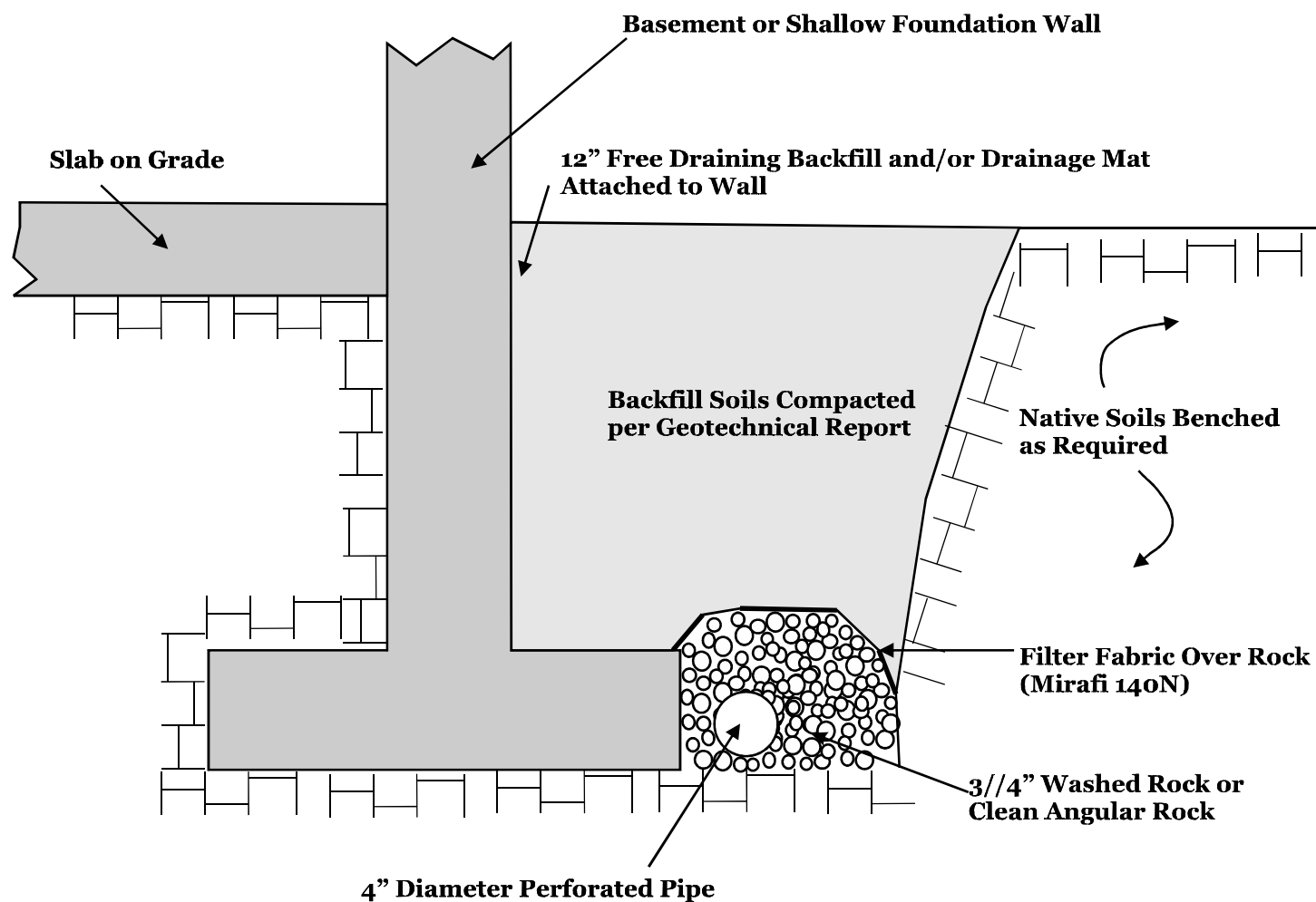
Not to Scale

**SITE MAPS**  
**FIGURE 1**

Proposed Additions  
7520 Mercer Terrace Drive  
Mercer Island, Washington

Cobalt Geosciences, LLC  
P.O. Box 82243  
Kenmore, WA 98028  
(206) 331-1097  
[www.cobaltgeo.com](http://www.cobaltgeo.com)  
[cobaltgeo@gmail.com](mailto:cobaltgeo@gmail.com)





Not to Scale



Typical Foundation Drain Detail

Attachment

Cobalt Geosciences, LLC  
 PO Box 1792  
 North Bend, WA 98045  
 (206) 331-1097  
[www.cobaltgeo.com](http://www.cobaltgeo.com)  
[phil@cobaltgeo.com](mailto:phil@cobaltgeo.com)

## Unified Soil Classification System (USCS)

| MAJOR DIVISIONS                                                                   |                                                                       |                                                | SYMBOL                                                                            |                                                                                   | TYPICAL DESCRIPTION                                                                               |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| COARSE GRAINED SOILS<br>(more than 50% retained on No. 200 sieve)                 | Gravels<br>(more than 50% of coarse fraction retained on No. 4 sieve) | Clean Gravels<br>(less than 5% fines)          |  | GW                                                                                | Well-graded gravels, gravels, gravel-sand mixtures, little or no fines                            |
|                                                                                   |                                                                       |                                                |  | GP                                                                                | Poorly graded gravels, gravel-sand mixtures, little or no fines                                   |
|                                                                                   |                                                                       | Gravels with Fines<br>(more than 12% fines)    |  | GM                                                                                | Silty gravels, gravel-sand-silt mixtures                                                          |
|                                                                                   |                                                                       |                                                |  | GC                                                                                | Clayey gravels, gravel-sand-clay mixtures                                                         |
|                                                                                   | Sands<br>(50% or more of coarse fraction passes the No. 4 sieve)      | Clean Sands<br>(less than 5% fines)            |  | SW                                                                                | Well-graded sands, gravelly sands, little or no fines                                             |
|                                                                                   |                                                                       |                                                |  | SP                                                                                | Poorly graded sand, gravelly sands, little or no fines                                            |
|                                                                                   |                                                                       | Sands with Fines<br>(more than 12% fines)      |  | SM                                                                                | Silty sands, sand-silt mixtures                                                                   |
|                                                                                   |                                                                       |                                                |  | SC                                                                                | Clayey sands, sand-clay mixtures                                                                  |
|                                                                                   | FINE GRAINED SOILS<br>(50% or more passes the No. 200 sieve)          | Silts and Clays<br>(liquid limit less than 50) | Inorganic                                                                         |  | ML                                                                                                |
|  |                                                                       |                                                |                                                                                   | CL                                                                                | Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays |
| Organic                                                                           |                                                                       |                                                |  | OL                                                                                | Organic silts and organic silty clays of low plasticity                                           |
| Silts and Clays<br>(liquid limit 50 or more)                                      |                                                                       | Inorganic                                      |  | MH                                                                                | Inorganic silts, micaceous or diatomaceous fine sands or silty soils, elastic silt                |
|                                                                                   |                                                                       |                                                |  | CH                                                                                | Inorganic clays of medium to high plasticity, sandy fat clay, or gravelly fat clay                |
|                                                                                   |                                                                       | Organic                                        |  | OH                                                                                | Organic clays of medium to high plasticity, organic silts                                         |
|                                                                                   |                                                                       | HIGHLY ORGANIC SOILS                           | Primarily organic matter, dark in color, and organic odor                         |                                                                                   |                 |

### Classification of Soil Constituents

MAJOR constituents compose more than 50 percent, by weight, of the soil. Major constituents are capitalized (i.e., SAND).

Minor constituents compose 12 to 50 percent of the soil and precede the major constituents (i.e., silty SAND). Minor constituents preceded by "slightly" compose 5 to 12 percent of the soil (i.e., slightly silty SAND).

Trace constituents compose 0 to 5 percent of the soil (i.e., slightly silty SAND, trace gravel).

### Relative Density (Coarse Grained Soils)

| N, SPT, Blows/FT | Relative Density |
|------------------|------------------|
| 0 - 4            | Very loose       |
| 4 - 10           | Loose            |
| 10 - 30          | Medium dense     |
| 30 - 50          | Dense            |
| Over 50          | Very dense       |

### Consistency (Fine Grained Soils)

| N, SPT, Blows/FT | Relative Consistency |
|------------------|----------------------|
| Under 2          | Very soft            |
| 2 - 4            | Soft                 |
| 4 - 8            | Medium stiff         |
| 8 - 15           | Stiff                |
| 15 - 30          | Very stiff           |
| Over 30          | Hard                 |

### Grain Size Definitions

| Description | Sieve Number and/or Size      |
|-------------|-------------------------------|
| Fines       | < #200 (0.08 mm)              |
| Sand        |                               |
| -Fine       | #200 to #40 (0.08 to 0.4 mm)  |
| -Medium     | #40 to #10 (0.4 to 2 mm)      |
| -Coarse     | #10 to #4 (2 to 5 mm)         |
| Gravel      |                               |
| -Fine       | #4 to 3/4 inch (5 to 19 mm)   |
| -Coarse     | 3/4 to 3 inches (19 to 76 mm) |
| Cobbles     | 3 to 12 inches (75 to 305 mm) |
| Boulders    | >12 inches (305 mm)           |

### Moisture Content Definitions

|       |                                              |
|-------|----------------------------------------------|
| Dry   | Absence of moisture, dusty, dry to the touch |
| Moist | Damp but no visible water                    |
| Wet   | Visible free water, from below water table   |

Soil Classification Chart

Figure C1



Cobalt Geosciences, LLC  
P.O. Box 82243  
Kenmore, WA 98028  
(206) 331-1097  
[www.cobaltgeo.com](http://www.cobaltgeo.com)  
[cobaltgeo@gmail.com](mailto:cobaltgeo@gmail.com)

# Log of Hand Boring HB-1

|                    |                                   |                           |
|--------------------|-----------------------------------|---------------------------|
| Date: August 2023  | Depth: 6'                         | Initial Groundwater: None |
| Contractor:        | Elevation:                        | Sample Type: Grab         |
| Method: Hand Auger | Logged By: PH      Checked By: SC | Final Groundwater: N/A    |

| Depth (Feet) | Interval | % Recovery | Blows/6" | Graphic Log | USCS Symbol | Material Description                                                                                                                                    | Groundwater | Moisture Content (%) |              |
|--------------|----------|------------|----------|-------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|--------------|
|              |          |            |          |             |             |                                                                                                                                                         |             | Plastic Limit        | Liquid Limit |
|              |          |            |          |             |             | Vegetation/Topsoil                                                                                                                                      |             |                      |              |
| 1            |          |            |          |             | SM          | Loose to medium dense, silty-fine to medium grained sand with gravel, locally mottled yellowish brown to grayish brown, moist. (Weathered Glacial Till) |             |                      |              |
| 2            |          |            |          |             |             |                                                                                                                                                         |             |                      |              |
| 3            |          |            |          |             |             |                                                                                                                                                         |             |                      |              |
| 4            |          |            |          |             |             |                                                                                                                                                         |             |                      |              |
| 5            |          |            |          |             | SM          | Medium dense to dense, silty-fine to medium grained sand with gravel, grayish brown, moist. (Glacial Till)                                              |             |                      |              |
| 6            |          |            |          |             |             | End of Hand Boring 6'                                                                                                                                   |             |                      |              |
| 7            |          |            |          |             |             |                                                                                                                                                         |             |                      |              |
| 8            |          |            |          |             |             |                                                                                                                                                         |             |                      |              |
| 9            |          |            |          |             |             |                                                                                                                                                         |             |                      |              |
| 10           |          |            |          |             |             |                                                                                                                                                         |             |                      |              |

# Log of Hand Boring HB-2

| Date: August 2023  |          |            | Depth: 6'                         |             |             | Initial Groundwater: None                                                                                                                               |             |                      |              |    |    |    |    |
|--------------------|----------|------------|-----------------------------------|-------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------|--------------|----|----|----|----|
| Contractor:        |          |            | Elevation:                        |             |             | Sample Type: Grab                                                                                                                                       |             |                      |              |    |    |    |    |
| Method: Hand Auger |          |            | Logged By: PH      Checked By: SC |             |             | Final Groundwater: N/A                                                                                                                                  |             |                      |              |    |    |    |    |
| Depth (Feet)       | Interval | % Recovery | Blows/6"                          | Graphic Log | USCS Symbol | Material Description                                                                                                                                    | Groundwater | Moisture Content (%) |              |    |    |    |    |
|                    |          |            |                                   |             |             |                                                                                                                                                         |             | Plastic Limit        | Liquid Limit |    |    |    |    |
|                    |          |            |                                   |             |             |                                                                                                                                                         |             | SPT N-Value          |              |    |    |    |    |
|                    |          |            |                                   |             |             |                                                                                                                                                         |             | 0                    | 10           | 20 | 30 | 40 | 50 |
|                    |          |            |                                   |             |             | Vegetation/Topsoil                                                                                                                                      |             |                      |              |    |    |    |    |
| 1                  |          |            |                                   |             | SM          | Loose to medium dense, silty-fine to medium grained sand with gravel, locally mottled yellowish brown to grayish brown, moist. (Weathered Glacial Till) |             |                      |              |    |    |    |    |
| 2                  |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |
| 3                  |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |
| 4                  |          |            |                                   |             | SM          | Medium dense to dense, silty-fine to medium grained sand with gravel, grayish brown, moist. (Glacial Till)                                              |             |                      |              |    |    |    |    |
| 5                  |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |
| 6                  |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |
| 7                  |          |            |                                   |             |             | End of Hand Boring 6'                                                                                                                                   |             |                      |              |    |    |    |    |
| 8                  |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |
| 9                  |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |
| 10                 |          |            |                                   |             |             |                                                                                                                                                         |             |                      |              |    |    |    |    |



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Cobalt Geosciences, LLC  
P.O. Box 82243  
Kenmore, WA 98028  
(206) 331-1097  
[www.cobaltgeo.com](http://www.cobaltgeo.com)  
[cobaltgeo@gmail.com](mailto:cobaltgeo@gmail.com)

Proposed Additions  
7520 Mercer Terrace Drive  
Mercer Island, Washington

**Hand  
Boring  
Log**



Cobalt Geosciences, LLC  
P.O. Box 1792  
North Bend, WA 98045

September 19, 2024

Diego Pineda  
[diego@buildstuffstudios.com](mailto:diego@buildstuffstudios.com)

**RE: Plan Review**  
Proposed Additions  
7520 Mercer Terrace Drive  
Mercer Island, Washington

In accordance with your authorization, Cobalt Geosciences, LLC has prepared a plan review letter for the project.

We have reviewed the plans by Build Stuff LLC dated September 19, 2024 and have no comments at this time. We should be on site to verify aspects of earthwork construction, including but not limited to soil bearing, foundation drains, excavations, fill compaction, and subgrade stability.

Sincerely,

**Cobalt Geosciences, LLC**



9/19/2024  
Phil Haberman, PE, LG, LEG  
Princip



# City of Mercer Island Property Hazard Report

Site Address: 7520 MERCER TERRACE DR

Parcel #: 5453600100

Report Generated on October 30, 2024

## Potential Slide:



## Steep Slope:

No Hazard Found

## Erosion:



## Seismic:

No Hazard Found

## Wind Exposure:



## Wind Speed Up Values 1.0 1.3 1.6 1.9



These maps are for the use of City of Mercer Island staff for the purposes of permit application evaluation. It provides a general assessment of known or suspect hazard areas for which the City will require site and project specific evaluation by a Washington State licensed engineer, geologist or engineering geologist prior to issuing a site for development. All areas have not specifically evaluated for hazards and there may be locations that are not correctly represented on these maps. It is the responsibility of the property owners and map users to evaluate risk associated with their proposed development. No site-specific assessment of risk is implied or otherwise indicated by the City of Mercer Island by these maps.

## **Criteria Compliance Narrative:**

**Critical Area Review 2:** Per sections MICC 19.07.090, MICC 19.07.160, MICC 19.07.170, MICC 19.07.180 and/or MICC 19.07.190.

### **MICC 19.07.090 (A): Critical Area Review 1:**

**Answer:** Not applicable

### **MICC 19.07.090 (B): Critical Area Review 2:**

**1. The purpose of a critical area review 2** is to review critical area studies and mitigation plans in support of proposed buffer averaging and reduction of wetland and watercourse buffers.

#### **2. Review timing and sequence.**

**a.** When development and/or activity within a wetland, watercourse, fish and wildlife habitat conservation area or buffer associated with these critical area types is proposed, a critical area review 2 is required to be reviewed and approved prior to construction authorization.

**Answer:** Not applicable

**b.** When development and/or activity is proposed on a site containing only geologically hazardous areas, an applicant has the option of either:

*i. Applying for a critical area review 2 in advance of construction permits, using the procedures required for a Type 3 land use review; or*

**Answer:** Not applicable

*ii. Requesting consolidation of the review of geologically hazardous areas together with construction permit review.*

**Answer:** A concurrent review request form has been submitted at Intake screening for a construction permit and a land use application for Critical Area Review 2.

**c.** When development and/or activity is proposed on a site containing geologically hazardous areas and one or more of the critical area types listed in subsection (B)(2)(a) of this section or the associated buffer of one of those critical areas, a critical area review 2 reviewing all critical areas is required to be reviewed and approved prior to construction authorization, using the procedures required for a Type 3 land use review.

**Answer:** Not applicable

#### **3. Requirements for a complete application include:**

**a.** A completed development application coversheet;

**Answer:** A completed development application coversheet has been submitted at intake screening.

**b.** A critical area study, meeting the requirements of section 19.07.110, critical area study; and

**Answer:** A critical area study has been prepared by Cobalt Geosciences LLC, licensed Geotech dated 08/22/2023. Compliance with section 19.07.110 as stated below.

**19.07.110 - Critical area study.**

**A. A critical area study shall be required when a development proposal will result in an alteration to one or more critical areas or critical area buffers or when required to determine the potential impact to a critical area.**

**Answer:** Per City of Mercer Island GIS Mapped Hazards, the eastern portion of the site is within an erosion and potential landslide hazard area. A critical area study has been prepared by a licensed Geotech to assess potential impacts on critical areas.

**B. The critical area study shall be in the form of a written report supported by graphic information prepared by a qualified professional using guidance based on the best available science consistent with the standards in WAC Chapter 365-195 and shall contain the following items, as applicable to adequately evaluate the proposal, proposed alterations, and mitigation:**

**1. Disclosure of the presence of critical areas, including a delineation and type or category of critical area, on the development proposal site and any mapped or identifiable critical areas on or off site within the distance equal to the largest potential required buffer applicable to the development proposal area on the applicant's property;**

**Answer:** A "Critical Areas Notice on Title" has been recorded with King County Recorder's office dated 04/25/2024. Proof of recorded document has been submitted for land use review along with this compliance narrative.

**2. A topographic and boundary survey;**

**Answer:** A topographic and boundary survey has been prepared by Terrane LLC, licensed Surveyor - dated 09/08/2023. See Survey in the application plan set on sheet A002.

**3. A statement specifying the accuracy of the report and all assumptions made and relied upon;**

**Answer:** Per Geotech report page #10, section "statement of general conditions" - "The information, opinions, and/or recommendations made in this report are in accordance with Cobalt Geosciences present understanding of the site-specific project as described by the Client. The applicability of these is restricted to the site conditions encountered at the time of the investigation or study."

**4. A description of the methodologies used to conduct the critical area study, including references;**

**Answer:** Per Geotech report, pages #1-2, "Soil & groundwater conditions". This section details the testing methods used to conduct the critical area study. Reference hand boring logs on pages #13-15.

**5. A scale map of the development proposal site;**

**Answer:** Per Geotech Report page #11. This page includes a preliminary design site plan drawn to scale provided by the designer. Reference Sheet A100 of the application plan set for the current site plan.

**6. Photographic records of the site before the proposed alteration occurs;**

**Answer:** Refer to the intake screening submittal document "Critical Area Site Images" containing Images of the site before any alteration occurs.

**7. An assessment of the probable effects to critical areas and associated buffers, including impacts caused by the development proposal and associated alterations to the subject property and impacts to other properties and any critical areas or buffers located on them resulting from the development of the site and the proposed development;**

**Answer:** Per Geotech report pages #2-3, sections “City of Mercer Island GIS Mapped Hazards” and “Statement of Risk”. These sections assess the effects of the critical areas mapped at the development site and nearby sites.

**8. A description of mitigation sequencing implementation described in [section 19.07.100](#) including steps taken to avoid and minimize critical areas impacts to the greatest extent feasible;**

**Answer:** Per Geotech report page #2, section “City of Mercer Island GIS Mapped Hazards” - “It is our opinion that the risk of erosion and landslide activity at this site is very low and will not be affected by the proposed construction provided erosion control measures are in place during construction and all areas are landscaping following construction...Mitigation for these hazards is not currently warranted”.

**9. Detailed studies, as required by this chapter, for individual critical area types in order to ensure critical area protection;**

**Answer:** Per Geotech report page #1, “The purpose of our evaluation was to provide recommendations for foundation design, grading, and earthwork as well as discussion of mapped geologic hazards”. Pages #1-2, “Soil & groundwater conditions”. This section details the testing methods used to conduct the critical area study. Reference hand boring logs on pages #13-15 of the report.

**10. Assessment of potential impacts that may occur on adjacent sites, such as sedimentation or erosion, where applicable; and**

**Answer:** Per Geotech report pages #2-3, section “Statement of Risk” - “This proposed development can be completed without adversely affecting geologic hazards near or within the site.”

**11. A post-design memorandum prepared by a qualified professional confirming that the proposed improvements comply with the design recommendations.**

**Answer:** Per Geotech report page #2, section “City of Mercer Island GIS Mapped Hazards” - “Mitigation for these hazards is not currently warranted”. No specific structural design recommendations were warranted to mitigate the development risk. Page #4, section “General” - “The proposed additions may be supported on shallow foundation systems bearing on medium dense or firmer native soils or on structural fill placed on the native soils.”

**C. The critical area study requirement may be waived or modified if the applicant demonstrates that the development proposal will not have an impact on the critical area or its buffer in a manner contrary to the purposes and requirements of this chapter.**

**Answer:** Noted

**19.07.090 (B)(3)(c)**

c. Additional information required by the city to confirm compliance with this title.

Answer: Noted

**19.07.090 (C) Reasonable use exceptions** shall be reviewed using the criteria in section 19.07.140, using the procedures required for a Type 4 land use review.

Answer: Not applicable

**19.07.090 (D) Public agency exceptions** shall be reviewed using the criteria in section 19.07.150, using the procedures required for a Type 3 land use review.

Answer: Not applicable

### **MICC 19.07.160 - Geologically hazardous areas:**

**A. Designation and typing.** Geologically hazardous areas are lands that are susceptible to erosion, landslides, seismic events, or other factors as identified by WAC 365-190-120. These areas may not be suited for development activities because they may pose a threat to public health and safety. Areas susceptible to one or more of the following types of hazards shall be designated as geologically hazardous areas: landslide hazard areas, seismic hazard areas, and erosion hazard areas.

Answer: Per City of Mercer Island GIS Mapped Hazards, the eastern portion of the site is within an erosion and potential landslide hazard area.

**B. General review requirements.** Alteration within geologically hazardous areas or associated buffers is required to meet the standards in this section, unless the scope of work is exempt pursuant to [section 19.07.120](#), exemptions, or a critical area review 1 approval has been obtained pursuant to [section 19.07.090\(A\)](#).

Answer: Scope of work is not exempt from this section.

**1.** When an alteration within a landslide hazard area, seismic hazard area or buffer associated with those hazards is proposed, the applicant must submit a critical area study concluding that the proposal can effectively mitigate risks of the hazard. The study shall recommend appropriate design and development measures to mitigate such hazards. The code official may waive the requirement for a critical area study and the requirements of subsections (B)(2) and (B)(3) of this section when he or she determines that the proposed development is minor in nature and will not increase the risk of landslide, erosion, or harm from seismic activity, or that the development site does not meet the definition of a geologically hazardous area.

Answer: A critical area study has been prepared by Cobalt Geosciences LLC, licensed Geotech dated 08/22/2023.

**2.** Alteration of landslide hazard areas and seismic hazard areas and associated buffers may occur if the critical area study documents find that the proposed alteration:

**a.** Will not adversely impact other critical areas;

Answer: Per Geotech report pages #2-3, section "Statement of Risk" - "This proposed development can be completed without adversely affecting geologic hazards near or within the site."

**b.** *Will not adversely impact the subject property or adjacent properties;*

**Answer:** Per Geotech report pages #2-3, section "Statement of Risk" - "This proposed development can be completed without adversely affecting geologic hazards near or within the site."

**c.** *Will mitigate impacts to the geologically hazardous area consistent with best available science to the maximum extent reasonably possible such that the site is determined to be safe; and*

**d.** *Includes the landscaping of all disturbed areas outside of building footprints and installation of hardscape prior to final inspection.*

**Answer:** Per Geotech page #4, section "General" - "The risk of landslide activity or severe erosion at the site is low to very low. Provided typical temporary erosion control measures are in place during construction and all areas are resurfaced with mulches/bark/compost and plantings or other landscaping, the risk of these hazards will remain low to very low."

**3.** *Alteration of landslide hazard areas, seismic hazard areas and associated buffers may occur if the conditions listed in subsection (B)(2) of this section are satisfied and the geotechnical professional provides a statement of risk matching one of the following:*

**a.** *An evaluation of site-specific subsurface conditions demonstrates that the proposed development is not located in a landslide hazard area or seismic hazard area;*

**b.** *The landslide hazard area or seismic hazard area will be modified or the development has been designed so that the risk to the site and adjacent property is eliminated or mitigated such that the site is determined to be safe;*

**c.** *Construction practices are proposed for the alteration that would render the development as safe as if it were not located in a geologically hazardous area and do not adversely impact adjacent properties; or*

**d.** *The development is so minor as not to pose a threat to the public health, safety and welfare.*

**Answer:** Per Geotech Report dated 08/22/23, Cobalt Geosciences LLC. Refer to pages #2-3, section "Statement of Risk." - "The project meets the criteria of c from above. Proper use of erosion control measures and permanent landscaping will result in a condition as if the development is not within a geologic hazard area. This proposed development can be completed without adversely affecting geologic hazards near or within the site."

**C. Development standards—Landslide hazard areas.** *Development is allowed within landslide hazard areas and associated buffers, when the following standards are met:*

**1.** *A critical area study shall be required for any alteration of a landslide hazard area or associated buffer;*

**Answer:** A critical area study has been prepared by Cobalt Geosciences LLC, licensed Geotech dated 08/22/2023. Landslide hazard buffers have not been identified as applicable to the site.

**2.** *Buffers shall be applied as follows. When more than one condition applies to a site, the largest buffer shall be applied:*

Answer: Not applicable.

**a. Steep slopes.** *Buffer widths shall be equal to the height of a steep slope, but not more than 75 feet, and applied to the top and toe of slopes;*

Answer: Not applicable.

**b. Shallow landslide hazard areas** *shall have minimum 25-foot buffers applied in all directions; and*

Answer: Not applicable.

**c. Deep-seated landslide hazard areas** *shall have 75-foot buffers applied in all directions.*

Answer: Not applicable.

#### **E. Development standards—Erosion hazard areas.**

**1.** *All development proposals shall demonstrate compliance with [chapter 15.09](#), storm water management program.*

Answer: The proposal is compliant with chapter 15.09. The development scope does not meet the definition of a small project that triggers the small project stormwater minimum requirements #1-5. The description of such developments is listed in subsection 15.09.050 (A)(1)(a-c):

“a. Result in 2,000 square feet, or greater, of new plus replaced hard surface area; or b. Have a land disturbing activity of 7,000 square feet or greater; or c. Result in a net increase of impervious surface of 500 square feet or greater.”

Refer to sheet A100.4 “Stormwater Calculations” of the application plan set. This plan shows the calculation for the new plus replaced hard surface area, the total is less than 2,000 sf and the net increase of impervious surface is less than 500 sf. This plan also shows that the land-disturbing activity is less than 7,000 sf.

**2.** *No development or activity within an erosion hazard area may create a net increase in geological instability on or off site.*

Answer: Refer to Geotech Report pages #2-3, section “Statement of Risk” - “This proposed development can be completed without adversely affecting geologic hazards near or within the site.”

Page #3, section “Erosion Hazard” - “It is our opinion that soil erosion potential at this project site can be reduced through landscaping and surface water runoff control.”

#### **F. Development standards—Additional criteria for specific activities.**

*MICC 19.07.160(F)(1) Trail building within geologically hazardous areas:*

Answer: Not applicable

**2.** Land clearing, grading, filling, and foundation work within: (a) an erosion hazard area, when 2,000 square feet or more of site disturbance is proposed, and/or (b) a landslide hazard area are not permitted between October 1 and April 1.

**a.** The code official may grant a waiver to this seasonal development limitation if the applicant provides a critical area study for the site concluding that:

**i.** Geotechnical slope stability concerns, erosion and sedimentation impacts can be effectively controlled on site consistent with adopted storm water standards; and

**ii.** The proposed construction work will not subject people or property, including areas off site, to an increased risk of associated impacts.

**b.** As a condition of the waiver, the code official may require erosion control measures, restoration plans, an indemnification, a release agreement and/or performance bond.

**c.** If site activities result in erosion impacts or threaten water quality standards, the city may suspend further work on the site and/or require remedial action.

**d.** Failure to comply with the conditions of an approved waiver shall subject the applicant to code compliance pursuant to [chapter 6.10](#), code compliance, including but not limited to civil penalties and permit suspension.

**Answer:** The proposal includes less than 2,000 sf of disturbed area within the erosion and landslide hazard area of the site. Refer to sheet A100.4 "Stormwater Calculations" and sheet L101 "Critical Area & Erosion Control" of the application plan set. The proposed addition footprint is 316 sf and the excavation footprint for the foundation work is 557 sf, for a combined site disturbance to the critical area of 873 sf.

It is not yet determined if a seasonal development limitation waiver will be required at the time of this submittal. This may depend on the anticipated approval timeline for the earth disturbance activities. The development will comply with Geotech recommendations. Per Geotech Report page #3, section "Erosion Hazard" - "It is our opinion that soil erosion potential at this project site can be reduced through landscaping and surface water runoff control...Typically, erosion of exposed soils will be most noticeable during periods of rainfall and may be controlled by the use of normal temporary erosion control measures, such as silt fences, hay bales, mulching, control ditches and diversion trenches...Erosion control measures should be in place before the onset of wet weather."

**19.07.170 - Fish and wildlife habitat conservation areas:**

**Answer:** Not applicable

**19.07.180 - Watercourses.**

**Answer:** Not applicable

**19.07.190 - Wetlands.**

**Answer:** Not applicable

Record Date:4/25/2024 11:38 AM

Electronically Recorded King County, WA

**City of Mercer Island  
Community Planning & Development  
9611 SE 36th St  
Mercer Island, WA 98040**

**Document Title(s)** (or transactions contained herein)\_\_\_\_\_ **Critical Areas Notice on Title** \_\_\_\_\_

\_\_\_\_\_  
**Reference number(s) of documents assigned or released**\_\_\_\_\_

Additional reference number of page \_\_\_\_\_ of document(s)

Additional names on page \_\_\_\_\_ of document(s)

**Legal description (abbreviated)**

Lot 10 Block 1 Plat/Section SE-25 Township 24 Range 4

Additional legal on page \_\_\_\_\_ of document(s)

**Grantor: Rodolfo Hernandez McIntyre and Shannon Hernandez McIntyre**

**Grantee: City of Mercer Island**

**Assessor's Property Tax Parcel/Account Number(s)**\_\_\_\_\_ **545360-0100**\_\_\_\_\_

**recording requested by  
First American Title as  
an accommodation only**

For Permit Number Building Permit #2402-026, Critical Area Review 2 #CA024-003

For Parcel Number 545360-0100

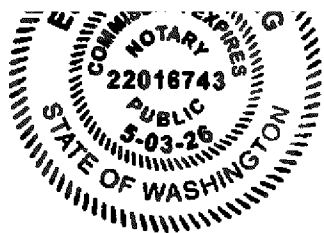
Street Address 7520 Mercer Terrace Dr, Mercer Island, WA 98040

This property contains critical areas (e.g. wetlands, streams, geologically hazardous areas, etc.) and/or critical area buffers as defined by the Mercer Island City Code (MICC) 19.07 and regulated by provisions in MICC 19.07.160, MICC 19.07.170, MICC 19.07.180, and/or MICC 19.07.190.

Due to development activity within a critical area and/or associated buffer, a City of Mercer Island Critical Area Study and Mitigation Plan has been required to be prepared and implemented for this property. This mitigation plan may have required some or all of the following: grading, soil amendments, native vegetation planting, watering, habitat feature or structure installation, fencing, signage, performance and/or maintenance bonding, annual maintenance, and annual monitoring reporting to be performed by a qualified professional at the property owner's expense. For further information regarding related requirements and limitations, please contact the City of Mercer Island Community Planning and Development Department.

This notice shall run with the land and shall not be removed except upon specific written authorization approved by the City of Mercer Island and recorded herein by King County.

I, (print name) SHANNON HERNANDEZ MCINTYRE hereby certify that I am the owner of the above-referenced property.



[Signature]  
Notary Public Signature  
Eugene E Wang  
Notary Public Printed Name  
05/03/2026

Commission Expiration

I, (print name) RODOLFO HERNANDEZ MCINTYRE hereby certify that I am the  
owner of the above-referenced property.

Owner's Signature RODOLFO HERNANDEZ

State of Washington, County of King

SUBSCRIBED AND SWORN TO before me this 23 day of APRIL, 2024.

Notary Seal



Eugene E. Luzong

Notary Public Signature

Eugene E. Luzong

Notary Public Printed Name

2026

Expiration

# EXHIBIT A

## Legal Description

The Land referred to herein below is situated in the County of King, State of Washington, and is described as follows:

LOT 10, BLOCK 1, MERCER TERRACE, ACCORDING TO THE PLAT RECORDED IN VOLUME 72 OF PLATS, PAGE 86, IN KING COUNTY, WASHINGTON.

SITUATE IN THE CITY OF MERCER ISLAND, COUNTY OF KING, STATE OF WASHINGTON.

Tax Parcel ID: 545360-0100

7520 Mercer Terrace Dr  
N

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# CITY OF MERCER ISLAND

## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | [www.mercergov.org](http://www.mercergov.org)

Inspection Requests: Online: [www.MyBuildingPermit.com](http://www.MyBuildingPermit.com) VM: 206.275.7730

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## CONCURRENT REVIEW

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I am requesting that my permit submittal be accepted and reviewed concurrently during the review of our land use action (File # \_\_\_\_\_). I fully understand that the land use application must be approved prior to the issuance of the permit. I take full responsibility for all fees incurred for the permit review and understand that the fees are payable to the City of Mercer Island regardless of the land use outcome. I hold the City harmless for any actions arising from the concurrent review of the permit application, including but not limited to the potential denial of the permit if the land use action is denied.

A handwritten signature in dark ink, appearing to read "Diego Pineda", is written over a horizontal line.

Signature

01/29/2024

Date

Diego Pineda

Name

7520 Mercer Terrace Dr, Mercer Island, WA 98040

Project Address

diego@buildstuffstudios.com

email

206-771-5014

Phone #



## COMMUNITY PLANNING & DEVELOPMENT

206.275.7605  
[www.mercerisland.gov/cpd](http://www.mercerisland.gov/cpd)

**May 14, 2024**

Build Stuff, LLC  
Attn: Diego Pineda  
31212 1st PI SW  
Federal Way, WA 98023  
Via: Email

RE: **CAO23-003** Letter of Completeness; 7520 Mercer Terrace Dr, Mercer Island, WA 98040

The City of Mercer Island received the above referenced application for a Critical Area Review 2 for the property located at 7520 Mercer Terrace Dr, Mercer Island, WA 98040 on March 3, 2024. The City has assigned file number CAO24-003 to the Critical Area Review 2 application. Following review of the application, City staff has determined that the application is complete and has established a vesting date of May 14, 2024.

The application is scheduled for mailing and posting on May 20, 2024 as required by MICC 19.15.030.

Formal review of the application will now begin in compliance with Mercer Island City Code, Chapter 19. As review progresses, additional documentation will most likely be requested.

Pursuant to Mercer Island City Code 19.15.110(B), if the applicant fails to provide the required information within 60 days from the date of any request for information, the application shall lapse, and become null and void.

Please do not hesitate to contact me at 206-275-7712 or via e-mail at [molly.mcguire@mercerisland.gov](mailto:molly.mcguire@mercerisland.gov) if you have any questions.

Sincerely,

Molly McGuire, Planner  
City of Mercer Island Community Planning and Development

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## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

206.275.7605 | [www.mercerisland.gov](http://www.mercerisland.gov)



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## PUBLIC NOTICE OF APPLICATION

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**NOTICE IS HEREBY GIVEN** for the application described below:

**File No.:** CAO24-003

**Permit Type:** Type III

**Description of Request:** A request for a Critical Area Review 2 for the construction of a 316 square foot first floor addition which includes an Accessory Dwelling Unit and a 316 square foot second floor addition to an existing single-family residence and roof remodel on a site located within geologically hazardous areas.

**Applicant/Owner:** Diego Pineda (Build Stuff, LLC) / Rodolfo Hernandez

**Location of Property:** 7520 Mercer Terrace Dr, Mercer Island WA 98040  
King County Assessor tax parcel number: 5453600100

**SEPA Compliance:**

The project is exempt from SEPA Review pursuant to [WAC 197-11-800](http://WAC 197-11-800).

**Project Documents:** <https://mieplan.mercergov.org/public/CAO24-003>

**Written Comments:** This may be the only opportunity to comment on this proposal. Written comments on this proposal may be submitted to the City of Mercer Island either by email, in person, or by mail to the City of Mercer Island, 9611 SE 36th Street, Mercer Island, WA 98040-3732. Anyone may comment on the application, receive notice, and request a copy of the decision once made. Only those persons who submit written comments or participate at the public hearing (if a hearing is required) will be parties of record; and only parties of record will have the right to appeal.

**Public Hearing and Public Meeting:** Pursuant to [MICC 19.15.030](http://MICC 19.15.030) Tables A and B, a public hearing is not required for Type I-III permits.

**Applicable Development Regulations** Applications for Critical Area Review 2 are required to be processed as Type III land use reviews pursuant to Mercer Island City Code (MICC) 19.15.030. Processing requirements for Type III land use reviews are further detailed in MICC 19.15.030.

**Other Associated Permits:** Permit No(s): 2402-026; ADU24-002

**Environmental Documents:** Copies of all studies and/or environmental documents are available through the above project documents link.

**Application Process Information:**

|                                |               |
|--------------------------------|---------------|
| Date of Application:           | March 4, 2024 |
| Determined to Be Complete:     | May 14, 2024  |
| Weekly Permit Bulletin Notice: | May 20, 2024  |
| Date Mailed:                   | May 20, 2024  |
| Date Posted on Site:           | May 20, 2024  |

Comment Period Ends:

5:00PM on June 19, 2024

**Project Contact:**

Molly McGuire, Senior Planner

molly.mcguire@mercerisland.gov | (206) 275-7712



## COMMUNITY PLANNING & DEVELOPMENT

206.275.7605  
[www.mercerisland.gov/cpd](http://www.mercerisland.gov/cpd)

**June 28, 2024**

Build Stuff, LLC  
Attn: Diego Pineda  
31212 1st Pl SW  
Federal Way, 98023  
Via: Email

RE: **CAO24-003** Review Letter 1; 7520 Mercer Terrace Drive, Mercer Island, WA 98040

Dear Diego Pineda,

The City of Mercer Island Community Planning and Development Department has completed a review for compliance with the zoning code, Title 19 of the Mercer Island City Code (MICC) for the above Critical Area Review 2 application. The following issues need to be addressed in your resubmission:

### Planning:

1. The Limited Geotechnical Evaluation prepared by Cobalt Geosciences, LLC contains recommendations for the proposed development on pages 4-8. Provide a post-design memorandum prepared by Cobalt Geosciences, LLC confirming that the proposed development complies with the design recommendations.

The City's processing of the Critical Area Review 2 application has been put on hold until these issues are resolved. Pursuant to MICC 19.15.110, all requested information must be submitted within 60 days or a request for extension requested. The deadline for a complete response or request for extension is August 26, 2024. If a complete response is not received or an extension response has not been received prior to that date, the application will expire and be canceled for inactivity. No additional notification regarding this deadline or expiration of the application will be provided.

Sincerely,

Molly McGuire, Senior Planner  
City of Mercer Island Community Planning and Development  
[molly.mcguire@mercerisland.gov](mailto:molly.mcguire@mercerisland.gov) | (206) 275-7712

**Responding and Resubmitting: [Click for More Detailed Instructions](#)**

1. Reply to all review comments within the review letter.
2. Update your drawings, and any necessary supplemental documents or forms.
3. Upload updated drawings to the [Mercer Island Permit Submittal Portal](#).

**Having Trouble? Please Review the Following:**

[Accessing, Reviewing, and Responding to MlePlan Comments](#)

[Troubleshooting MlePlan](#)

[MlePlan Overview](#)

**Thank you for your participation in the MlePlan review process.**

# Correction Response Letter – Review 1

**Permit Application #:** CAO24-003

**Applicant:** Build Stuff LLC

**Date:** 09/19/2024

Molly,

Please see the responses to individual corrections below in bold referencing submittal documents for this application.

- 1. *The Limited Geotechnical Evaluation prepared by Cobalt Geosciences, LLC contains recommendations for the proposed development on pages 4-8. Provide a post-design memorandum prepared by Cobalt Geosciences, LLC confirming that the proposed development complies with the design recommendations.*

**A post-design memorandum has been submitted prepared by Cobalt Geosciences, LLC dated September 19, 2024. The post-design memorandum is based on the latest plans dated September 19, 2024, prepared to address the review comments from 2402-026-SUB2-PLANS\_review.**

Sincerely,

**Diego Pineda**

Designer

(206) 771-5014

Diego@buildstuffstudios.com

Build Stuff LLC

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## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040  
206.275.7605 | [www.mercerisland.gov/cpd](http://www.mercerisland.gov/cpd)



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## PUBLIC NOTICE OF DECISION

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**NOTICE IS HEREBY GIVEN** that approval has been granted for the application described below:

**File No.:** CAO24-003

**Permit Type:** Type III

**Description of Request:** A request for a Critical Area Review 2 for the construction of a 316 square foot first floor addition which includes an Accessory Dwelling Unit and a 316 square foot second floor addition to an existing single-family residence and roof remodel on a site located within geologically hazardous areas.

**Applicant/Owner:** Diego Pineda (Build Stuff, LLC) / Rodolfo Hernandez

**Location of Property:** 7520 Mercer Terrace Dr, Mercer Island, WA 98040  
King County Assessor tax parcel number: 5453600100

**SEPA Compliance:**

The project is exempt from SEPA Review pursuant to [WAC 197-11-800\(1\)\(b\)\(ii\)](#).

**Applicable Development Regulations:** Pursuant to Mercer Island City Code (MICC) [19.15.030](#) Table A, applications for Critical Area Review 2 are required to be processed as Type III land use reviews. Processing requirements for Type III land use reviews are further detailed in MICC 19.15.030 Table B.

**Other Associated Permits:** 2402-026; ADU24-002

**Project Documents:** <https://mieplan.mercergov.org/public/CAO24-003>

**Decision:** Approved subject to conditions.

**Appeal Rights:** *DISCLAIMER: This information is provided as a courtesy. It is the ultimate responsibility of the appellant to comply with all legal requirements for the filing of an appeal.*

Parties of record have the right to appeal certain permit and land use decisions. In some cases, other affected parties also have appeal rights. Depending on the type of decision, the appeal may be heard by a City Hearing Examiner, Commission, Board, or City Council, or outside the City to the State Shoreline Hearings Board, the State Growth Management Hearings Board, or King County Superior Court. For a comprehensive list of actions and the applicable entity who will hear the appeal, see MICC 19.15.030 Table B.

If you desire to file an appeal of a decision that is appealable to the City, you must submit the appropriate form and file it with the City Clerk **within the time stated in the Notice of Decision**. Forms are available from Community Development and Planning. Upon receipt of a timely complete [appeal application](#) and [appeal fee](#), an appeal hearing will be scheduled. To reverse, modify or remand a decision, the appeal hearing body must find that there has been substantial error; the proceedings were materially affected by irregularities in procedure; the decision was unsupported by material and substantial evidence in view of the entire record; or the decision is in conflict with the City's applicable decision criteria.

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|-------------------------------------------------|----------------------------------------------------------------------------------|-----------------------------------------------|
| <b>Application<br/>Process<br/>Information:</b> | Date of Application:                                                             | March 4, 2024                                 |
|                                                 | Determined to Be Complete:                                                       | May 14, 2024                                  |
|                                                 | Public Comment Period:                                                           | May 20, 2024 through 5:00 PM on June 19, 2024 |
|                                                 | Date Notice of Decision Issued:                                                  | November 4, 2024                              |
|                                                 | Appeal Filing Deadline:                                                          | 5:00 PM on November 18, 2024                  |
| <b>Project Contact:</b>                         | Molly McGuire, Senior Planner<br>molly.mcguire@mercerisland.gov   (206) 275-7712 |                                               |